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DATA REPORT, VOLUME I, VELOCITY AND TEMPERATURE PROFILE DATA FO--ETC(1)

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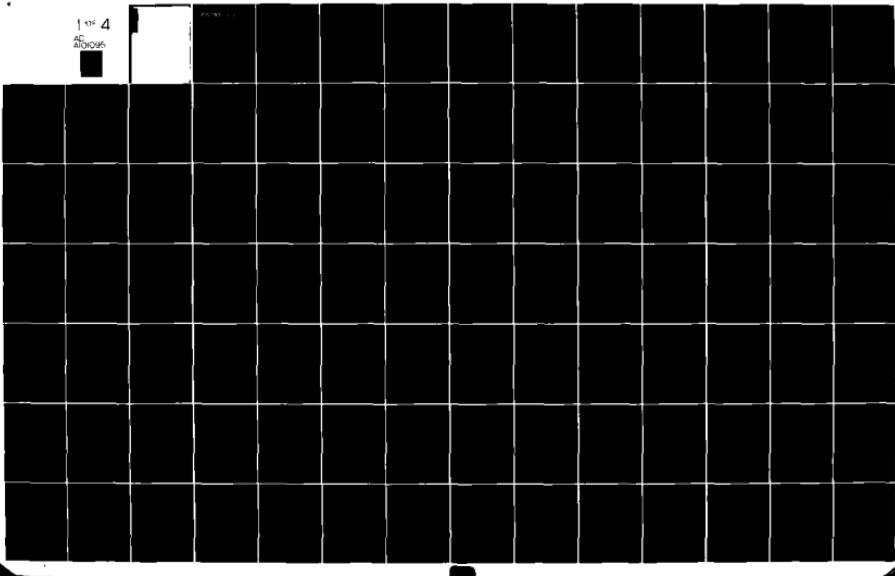
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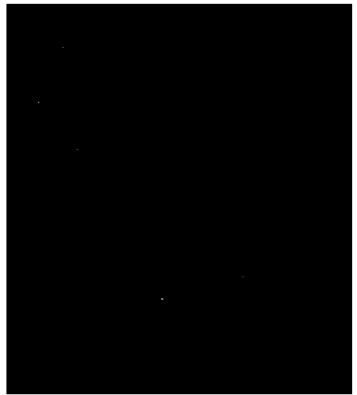
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1 OF 4
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UNITED TECHNOLOGIES RESEARCH CENTER



East Hartford, Connecticut 06108

1 R81-914388-15

6 Data Report. Velocity
and Temperature Profile Data for Zero
Pressure Gradient, Fully Turbulent
Boundary Layers.

Contract No. F49620-78-C-0064

Project-Task 2307 A4
61102 P

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A

DATE January 1981

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profile data for the individual boundary layer traverses are presented in
this report.

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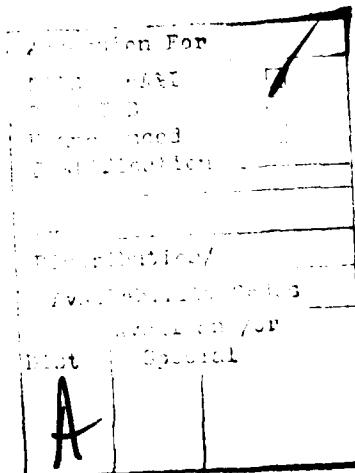
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R81-914388-15

~~DATA~~ Data Report - Vol. I
Velocity and Temperature Profile Data for
Zero Pressure Gradient, Fully Turbulent Boundary Layers

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FOREWORD

This report was prepared for the Air Force Office of Scientific Research, United States Air Force by the United Technologies Corporation Research Center, East Hartford, Connecticut, under Contract F49620-78-C-0064, Project Task No. 2307/A4 61102 F. The performance period covered by this report was from 1 June 1978 to 31 January 1981. The project monitors were Dr. D. G. Samaras and Dr. James Wilson.

INTRODUCTION

Experimental research has been conducted to determine the influence of a free-stream turbulence on zero pressure gradient, fully turbulent boundary layer flow. Convective heat transfer coefficients, boundary layer mean velocity and temperature profile data and wall static pressure distribution data were obtained for five flow conditions of constant free-stream velocity and free-stream turbulence intensities ranging from approximately $\frac{1}{4}\%$ to 7%. Free-stream multi-component turbulence intensity, longitudinal integral scale, and spectral distributions were obtained for the various turbulence levels. A comprehensive report containing a description of the experimental equipment, a presentation of the reduced data and an analysis of the results is available in Ref. 1. In Ref. 1 it has been shown that the test results with $\frac{1}{4}\%$ free-stream turbulence are in excellent agreement with classic two-dimensional, low free-stream turbulence, turbulent boundary layer correlations, thus establishing the absolute accuracy of the experiment. The data obtained for the test cases with higher free-stream turbulence indicate that the turbulence has a significant effect on turbulent boundary layer skin friction and heat transfer. It has also been shown in Ref. 1 that these effects are a function of the free-stream turbulence intensity, the turbulence length scale, and the boundary layer momentum thickness Reynolds number. Suggested correlations for the influence of free-stream turbulence on skin friction, heat transfer, and the Reynolds analogy factor are given.

Mean velocity and temperature profile data for the individual boundary layer traverses are presented in this report.

DESCRIPTION OF BOUNDARY LAYER DATA REDUCTION SYSTEM

A computer program has been written which reduces, plots, and tabulates the velocity and temperature boundary layer profile data obtained by the UTRC Boundary Layer Wind Tunnel Data Acquisition System. Following is a brief description of this reduction program.

(a) Mean velocities (U) are measured with miniature flattened pitot probes. These velocities are corrected for probe Reynolds number and wall blockage effects using the results of Refs. 2, 3, and 4. Except for those measurements extremely close to the wall ($y \sim < 0.010$ in.) the corrections were less than 1% of the measured velocity. The maximum velocity correction (5%) resulted for the case of the probe touching the wall.

(b) Friction velocities (U_τ) for each profile are determined by a least squares fit of the velocity profile data from $50 \sim y \sim 500$ to the "law-of-the wall".

$$\frac{U}{U_\tau} = \frac{1}{K} \ln \frac{yU_\tau}{\nu} + C \quad (1)$$

where $K = 0.41$

$C = 5.0$

as recommended by Coles (Ref. 5).

Using this value of U_τ the velocity and temperature data are plotted in universal coordinates $U^+ = \frac{U}{U_\tau}$ and $\theta^+ = \frac{(1 - \frac{U}{U_\tau}) \rho_w c_p \sqrt{\tau_w / \rho}}{q^*} \frac{dy}{\nu}$ vs. $y^+ = \frac{yU_\tau}{\nu}$. The velocity profile data are compared with Eq. (1) and the temperature data with Eq. (2).

$$\theta^+ = Pr_t \left(\frac{1}{K} \ln y^+ + C + P_s \right) \quad (2)$$

where $Pr_t = 0.9$

$K = 0.41$

$C = 5.0$

$P_s = -2.0$

(c) The following integral properties are determined

(i) displacement thickness

$$\delta^* = \int_0^\delta \left(1 - \frac{\rho U}{\rho_e U_e} \right) dy$$

(ii) momentum thickness

$$\theta = \int_0^\delta \frac{\rho U}{\rho_e U_e} \left(1 - \frac{U}{U_e} \right) dy$$

(iii) energy-dissipation thickness

$$\delta^{**} = \int_0^\delta \frac{\rho U}{\rho_e U_e} \left(1 - \frac{U^2}{U_e^2} \right) dy$$

(iv) enthalpy thickness

$$\delta_H = \int_0^{\delta_t} \frac{\rho U}{\rho_e U_e} \left(\frac{T - T_e}{T_e} \right) dy$$

(v)	kinematic displacement thickness	$\delta_K^* = \int_0^\delta \left(1 - \frac{U}{U_e}\right) dy$
(vi)	kinematic momentum thickness	$\theta_K = \int_0^\delta \frac{U}{U_e} \left(1 - \frac{U}{U_e}\right) dy$
(vii)	Clauser delta	$\Delta = \int_0^\delta \left(\frac{U_e - U}{U_\tau}\right) dy$
(viii)	Clauser shape parameter	$G = \frac{1}{\Delta} \int_0^\delta \left(\frac{U_e - U}{U_\tau}\right)^2 dy$

Measurement of velocity profile data very close ($y^+ < 30$) to a wall is difficult because of the extremely large local velocity gradients and the finite probe tip size. For the velocity profiles measured in this program a flattened impact probe with a probe tip height of approximately 0.007 in. is employed. This tip height corresponds to $\Delta y^+ \approx 10$ for most of the profiles (depending on the individual profile U_τ). Because the true distance from the wall to the effective center of the probe tip is uncertain (uncertainty of approximately ± 0.001 in.) the recommendation of Coles (Ref. 6) has been followed and the integral thicknesses are evaluated using standard sublayer functions very close to the wall. For values of $y^+ < 35$ (approximately three probe tip heights) the integral thicknesses are evaluated using the standard velocity sublayer and buffer zone function of Burton (Ref. 7).

$$y^+ = U^+ + \left(\frac{U^+}{6.74}\right)^7 \quad (3)$$

The thermocouple boundary layer probes are constructed with 0.001-in.-dia sensing elements. Because of this design, accurate temperature data can be obtained very close to the wall (for some profiles even within the viscous sublayer). For this reason it has been possible to use measured temperature data for evaluation of the integral thicknesses from $y^+ = 5$ to the edge of the boundary layer. For $y^+ < 5$ (viscous sublayer) the integral thicknesses are evaluated using Eq. (4).

$$\delta^+ = Pr U^+ \quad (4)$$

(d) The profile "wake strength" (Π) is determined from an iterative solution of two "local friction law" formulations from Coles (Ref. 6).

$$(i) \quad \frac{U_e}{U_\tau} = \frac{1}{\kappa} \ln \frac{8U_\tau}{\nu} + C + \frac{2\Pi}{\kappa}$$

$$(ii) \quad \left(\frac{\frac{8U_e}{\nu} - 65}{\frac{8U_\tau}{\nu}} \right) = 1 + \Pi$$

Since the term $\frac{v^* \delta}{\nu}$ can be eliminated from Eqs. (i) and (ii) all that is required to solve for Π are values of U_e , U_τ , and δ^* .

The wake component

$$w = \frac{\kappa}{\Pi} \left[\frac{U}{U_\tau} - \left(\frac{1}{\kappa} \ln y^+ + c \right) \right] \quad (5)$$

is plotted vs. $\frac{y}{\delta}$ and compared to Coles (Ref. 6) zero pressure gradient wake function

$$w = 2 \sin^2 \left(\frac{\pi}{2} \frac{y}{\delta} \right) \quad (6)$$

(e) Defect velocities are calculated using the value of U_τ determined in (b).

$$\text{Velocity defect} = \frac{U - U_e}{U_\tau}$$

The velocity defect distribution is plotted vs. $\frac{y}{\delta}$ and compared with inner and outer region defect correlations.

(i) In the inner region ($\frac{y}{\delta} < 0.2$) with the correlation of Schubauer and Tchen (Ref. 8).

$$\frac{U - U_e}{U_\tau} = \frac{1}{\kappa} \ln \left(\frac{y}{\delta} \right) - 2.35 \quad (7)$$

(ii) in the outer region ($\frac{y}{\delta} > 0.2$) with the correlation of Hama (Ref. 9)

$$\frac{U - U_e}{U_\tau} = -9.6 \left(1 - \frac{y}{\delta} \right)^2 \quad (8)$$

(f) The following is a list of all plots constructed, including those discussed in parts (b), (d), and (e):

i) $\frac{U}{U_e}$ vs $\frac{y}{\delta}$

ii) $\frac{T_w - T}{T_w - T_e}$ vs $\frac{y}{\delta}$

iii) U^+ vs y^+ (see b)

iv) T^+ vs y^+ (see b)

v) $\frac{U-U_e}{U_\tau}$ vs $\frac{Y}{\delta}$ (see d)

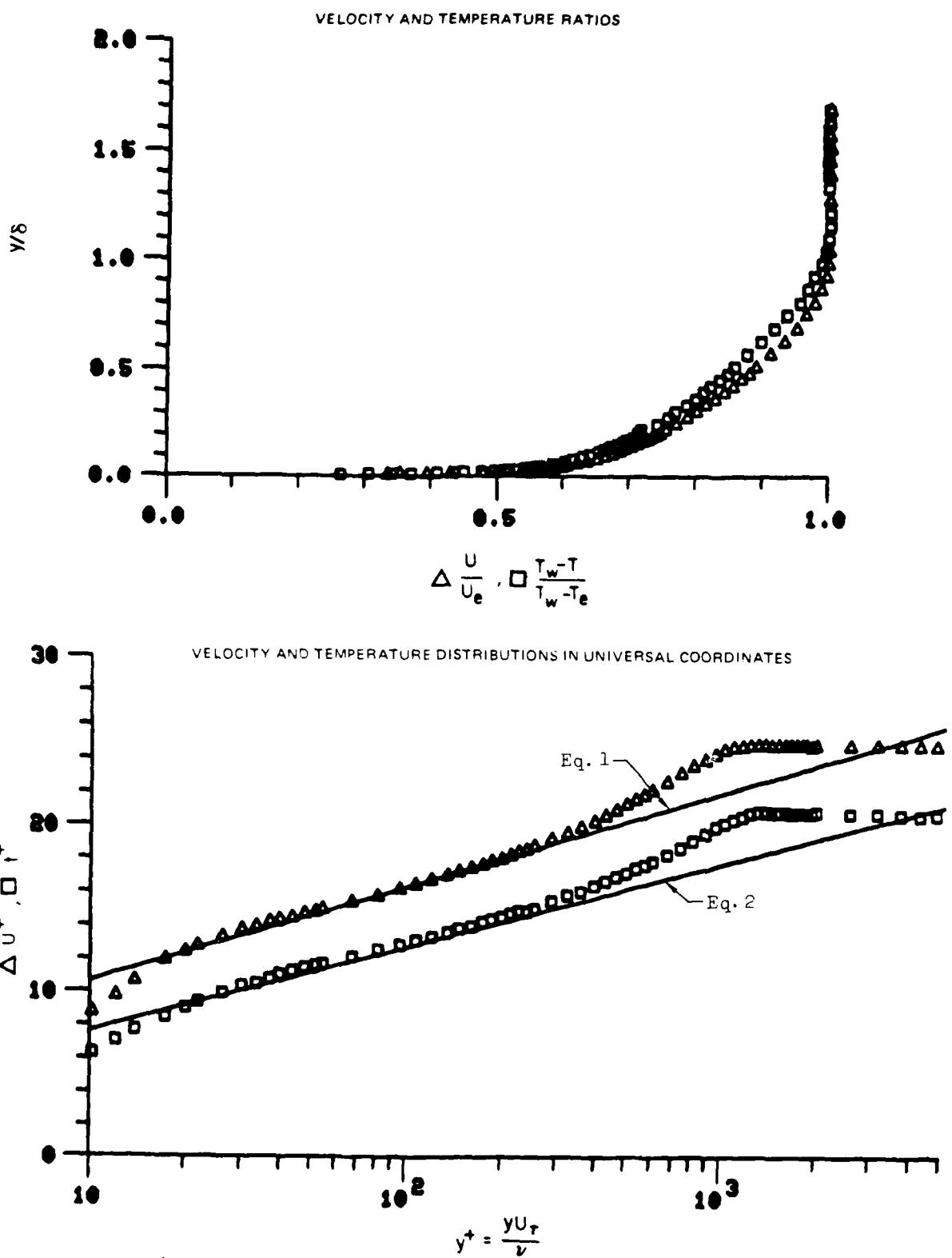
vi) w vs $\frac{y}{\delta}$ (see e)

(g) The following boundary layer values are tabulated

$$y, \frac{y}{\delta}, U, T, \frac{U}{U_e}, \frac{T_w - T}{T_w - T_e}, \frac{U - U_e}{U_\tau}, U^+, Y^+, T^+$$

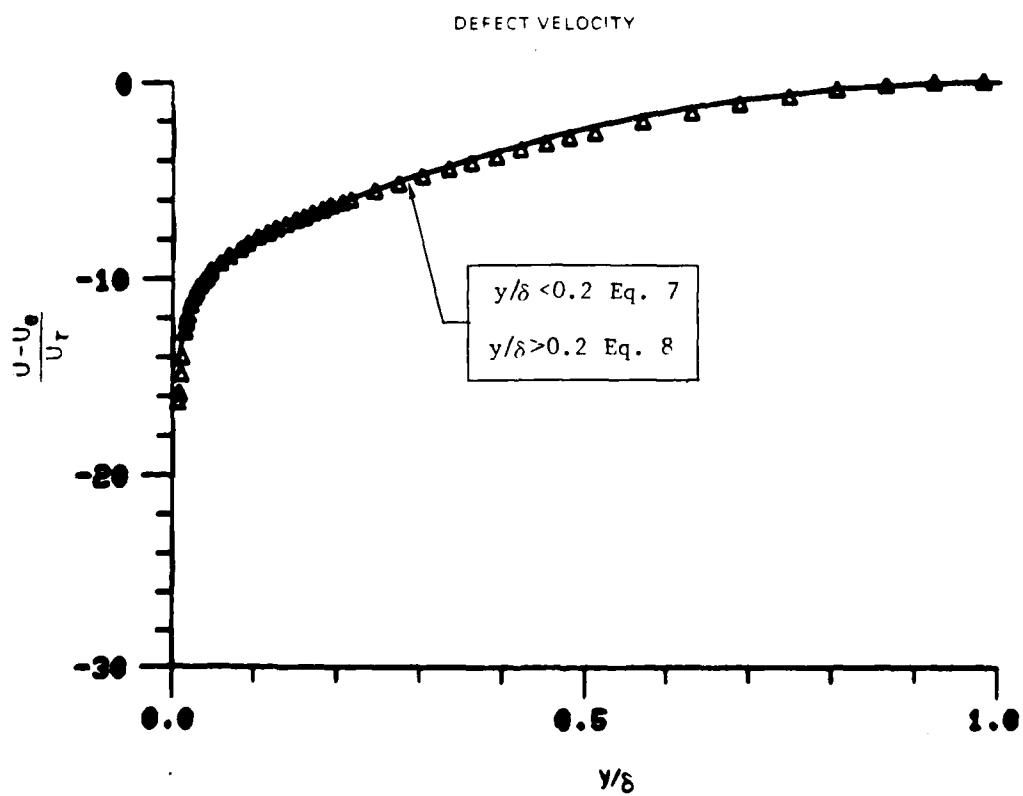
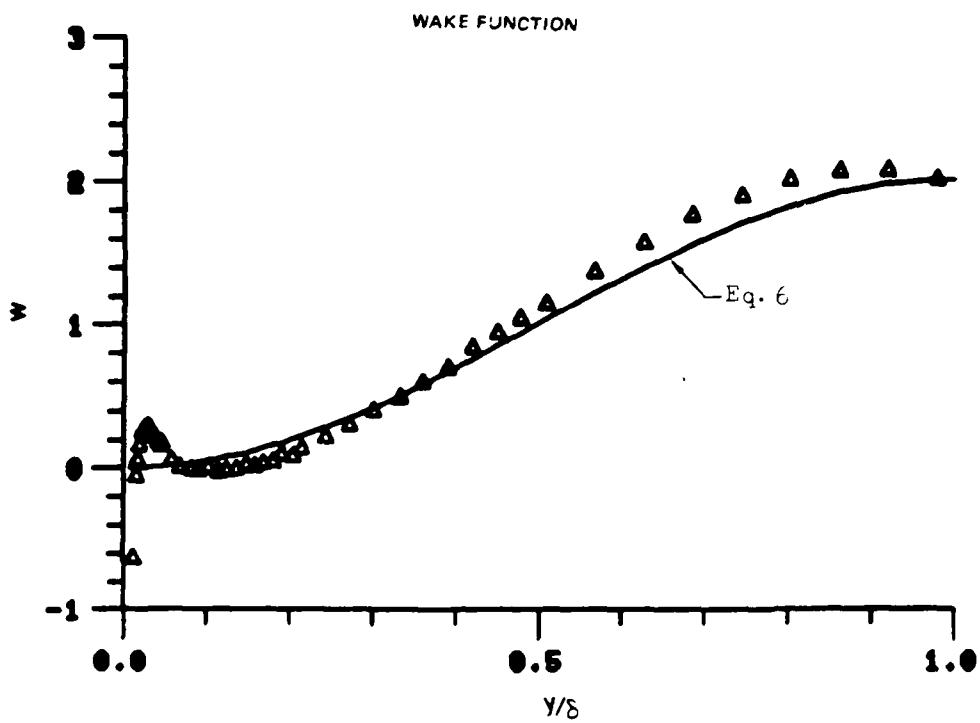
Sample reduced boundary layer profile data

Typical mean velocity and temperature boundary layer profile data obtained in the UTRC Boundary Layer Wind Tunnel with the test section adjusted for zero pressure gradient flow are presented in the following example figures. For these example figures the various analytical curves are labeled with their respective equation numbers.



Example Profile Plot A - Typical Boundary Layer Velocity and Temperature Profiles

78-12-100-1



Example Profile Plot B - Typical Boundary Layer Velocity Profiles

78-12-100-2

LIST OF TABLES AND FIGURES

Table & Figure No.	Grid No.	Run No.	Point No.	X (inches)	Ref
No Grid (minimum T)					
1		5	1	12.3	490
2		5	2	12.3	500
3		5	3	12.2	480
4		5	4	36.2	2648
5			5	36.2	2691
6			7	40.3	2968
7			8	40.3	3020
8			11	44.2	3333
9			13	52.2	3893
10			14	60.3	4399
11			16	60.3	3827
12			17	68.2	5017
13			18	76.2	5576
14			19	76.2	5574
15			20	76.2	5042
16			21	84.1	6072
17	2	8	3	20.2	1385
18			4	20.2	1530
19			5	20.2	1370
20			7	28.2	2332
21			9	36.2	2812
22			10	44.3	3402
23			13	52.2	4084
24			14	60.3	4608
25			15	60.3	5020
26			16	60.3	4900
27			17	68.4	5162
28			18	76.2	5791
29			20	76.2	6121
30			21	84.1	6402
31	2	7	3	12.2	1069
32			4	12.2	1069
33			5	12.2	1108
34			6	12.2	1035
35			8	28.2	2638
36			9	28.2	2701
37			10	28.2	2603
38			11	36.1	3336
39			12	44.3	3950
40			13	44.3	4022
41			14	44.3	4049
42			15	52.2	4657
43			17	60.2	5313
44			18	60.2	5294
45			20	68.2	5850
46			22	76.2	6609
47			23	76.2	6687
48			24	84.1	7033
49	3	10	1	12.0	1411
50		10	2	12.1	1482
51		10	3	12.1	1446
52		6	7	28.3	3059
53		10	4	28.2	3226
54		6	11	36.3	3731
55		6	12	44.4	4269
56		10	6	44.2	4629
57		6	15	52.2	4942
58		10	7	60.1	5890
59		6	18	60.3	5916
60		6	19	68.3	6247
61		10	9	76.2	7386
62		10	10	76.2	7159
63		6	24	84.2	7567
64	4	9	3	12.2	1313
65			4	12.2	1496
66			5	12.2	1444
67			6	20.2	2056
68			7	28.2	2814
69			8	28.2	3092
70			10	36.1	3535
71			12	44.2	4541
72			14	52.3	6919
73			16	60.2	5732
74			17	60.2	5796
75			18	68.2	6226
76			19	76.2	6751
77			20	76.2	7049
78			21	76.2	6836
79			22	84.0	6988

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7. Burton, R. A.: A Simple Universal Velocity Profile Equation, AIAA Journal 3, 1965.
8. Schubauer, G. B. and Tchen, C. M.: "Turbulent Flow" in Turbulent Flows and Heat Transfer, High Speed Aerodynamics and Jet Propulsion, Vol. 5, Princeton University Press, Princeton, N. J., 1959.
9. Hama, F. R.: Boundary-Layer Characteristics for Smooth and Rough Surfaces, Trans. Soc. Naval Architects Marine Engrs. 62, 1954.

JOB KLD32 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 1. NO GRID

BOUNDARY LAYER PROPERTIES

		STANDARD SUBLAYERED INTERPOLATION FUNCTION FROM TO WALL WALL TO Y+=35
FREE STREAM VELOCITY	=	99.325
FREE STREAM TEMPERATURE	=	68.384
WALL TEMPERTRATURE	=	103.130
WALL HEAT FLUX	=	.04603
FREE STREAM DENSITY	=	.07613
FREE STREAM KINEMATIC VISCOSITY	=	.0001602
DENSITY OF FLUID AT WALL	=	.07143
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.0001793
WALL/FREE STREAM DENSITY RATIO	=	.93826
LOCATION REYNOLDS NUMBER (REX)	=	634473.96
INPUT VALUE OF VELOCITY DELTA	=	.09300
INPUT VALUE OF TEMPERATURE DELTA	=	.10000
CALCULATED DELTA	=	.08530
DELTA 9.5% INPUT	=	.00000
DISPLACEMENT THICKNESS (DELSTAR)	=	.02631
MOMENTUM THICKNESS (THETA)	=	.00954
ENERGY-DISSIPATION THICKNESS	=	.01519
ENTHALPY THICKNESS	=	.00057
SHAPE FACTOR 12 (DFLSTAR/THETA)	=	2.75564
SHAPE FACTOR 32 (ENRGY/THETA)	=	1.59122
MOMENTUM THICKNESS REYNOLDS NUMBER	=	.493.14
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	1359.41
SKIN FRICTION COEFFICIENT	=	.003000
FRICITION VELOCITY	=	3.97120
LAW OF THE WALL CONSTANT (K)	=	.41000
LAW OF THE WALL CONSTANT (C)	=	5.00000
WAKE STRENGTH	=	1.57280
CLAESERS "DELTA" INTEGRAL	=	-.49291
CLAUSERS "G" INTEGRAL	=	6.78282
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.02272
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.00979
SHAPE FACTOR 12 - CONSTANT DENSITY	=	2.32194

LOCATION -X- 12.28000

Z = CENTERLINE

Table 1.

JOB KLD02 TAPE 3166R- FILES C1-21, RUNS 5.01-5.21 03/09/79

RUN NO. E. POINT 1. NO GRID

REDUCED PROFILE DATA

N	INCHES	Y	U	DELT A	FT/SEC	T	U/U'	THFTA	UTAU	U-U'	U(+)	T(+)	Y(+)
1	.0060	.C71	E.82	.95.26	.0.69	.140	-22.797	2.215	7.203	11.130			
2	.0060	.CF1	11.73	.97.50	.116	.150	-22.556	2.955	8.237	12.791			
3	.0079	.C03	14.82	.96.70	.149	.195	-21.286	3.726	9.615	14.637			
4	.0097	.114	20.47	.95.09	.206	.231	-19.857	5.154	11.890	17.959			
5	.0112	.147	24.97	.95.89	.241	.266	-18.723	6.268	13.565	20.728			
6	.0122	.143	2F.16	.93.11	.283	.268	-17.921	7.090	14.823	22.574			
7	.0135	.162	31.67	.91.67	.319	.230	-17.038	7.974	16.950	24.527			
8	.0141	.189	36.78	.89.64	.370	.388	-15.749	10.285	19.949	29.772			
9	.0147	.210	40.94	.88.29	.411	.427	-14.727	11.269	21.045	33.094			
10	.00197	.227	44.57	.86.90	.452	.470	-13.713	11.927	25.669	36.417			
11	.00210	.247	47.36	.85.77	.477	.499	-13.085	12.915	27.843	42.508			
12	.00249	.270	51.79	.84.41	.516	.542	-12.096	13.866	29.840	46.015			
13	.00270	.292	55.07	.92.95	.554	.581	-11.145	14.766	31.643	49.291			
14	.00277	.317	58.45	.81.53	.560	.622	-10.244	15.633	33.550	53.720			
15	.00351	.412	61.62	.80.44	.621	.658	-9.479	18.045	36.936	64.841			
16	.00419	.460	65.14	.73.03	.723	.758	-6.627	20.085	43.189	77.208			
17	.00486	.572	67.72	.71.79	.811	.840	-4.732	22.086	46.354	90.128			
18	.00551	.626	70.72	.71.79	.823	.902	-2.923	23.36	48.352	101.756			
19	.00626	.726	92.28	.70.44	.929	.941	-1.775	24.056	49.763	114.492			
20	.00689	.727	95.54	.60.43	.962	.968	-0.953	24.545	50.540	127.412			
21	.00723	.727	99.03	.60.03	.981	.984	-0.466	24.793	50.047	138.467			
22	.00770	.743	97.47	.60.61	.991	.991	-0.219	24.931	51.273	151.592			
23	.00835	.743	99.71	.60.61	.996	.996	-0.050	25.026	51.361	164.143			
24	.00843	.743	99.39	.60.40	1.001	.999	-0.017	25.026	51.414	175.587			
25	.00923	.745	99.27	.60.37	.983	1.000	-0.009	25.033	51.397	186.076			
26	.00976	.745	99.26	.60.37	.983	1.000	-0.032	25.043	51.392	200.073			
27	.01031	.745	99.49	.60.39	.983	1.000	-0.042	25.044	51.389	212.686			
28	.01122	.745	99.49	.60.39	.983	1.000	-0.031	25.042	51.382	225.667			
29	.01153	.713	99.27	.60.39	.999	1.000	-0.015	24.907	51.392	238.158			
30	.01462	.714	99.26	.60.39	.999	1.000	-0.016	24.906	51.378	269.005			
31	.01636	.918	99.15	.60.41	.999	1.000	-0.033	24.979	51.353	312.021			
32	.01812	.125	99.23	.60.40	.999	1.000	-0.024	24.982	51.361	334.506			
33	.01995	.125	99.21	.60.47	.999	1.000	-0.030	24.982	51.271	367.367			
34	.02167	.543	99.24	.60.48	1.000	.997	-0.007	25.055	51.250	388.738			
35	.02241	.745	99.24	.60.49	.999	.997	-0.020	24.991	51.234	432.146			
36	.02510	.945	99.29	.60.40	1.000	.997	-0.010	25.001	51.233	463.340			
37	.02635	.151	99.29	.60.47	.999	.997	-0.026	24.985	51.259	496.198			
38	.02849	.3566	99.23	.60.45	.999	.998	-0.019	24.963	51.268	527.572			
39	.03047	.3566	99.23	.60.41	.999	.999	-0.026	24.987	51.349	561.534			
40	.03777	14.502	99.23	.60.48	.997	.997	-0.075	24.937	51.255	1421.266			
41	.04270	.742	99.27	.60.48	.997	.997	-0.078	24.934	51.262	2283.253			
42	.04342	.742	99.27	.60.47	.997	.996	-0.067	24.945	51.163	3145.580			
43	.04370	.25	98.97	.60.57	.995	.995	-0.114	24.808	51.113	3044.832			
44	.04557	.25	98.97	.60.57	.997	.994	-0.066	24.946	51.155	4743.828			
45	.04621	.25	98.97	.60.58	.995	.994	-0.125	24.886	51.097	5545.254			
46	.04847	.35220	98.83	.60.58	.995	.994	-0.125	24.886	51.097	5545.254			

Table 1.

JOB KLDC2 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 03/39/79

RUN NO. 5. POINT 2. NO GRID

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y=35
FREE STREAM VELOCITY	99.196	99.196
FREE STREAM TEMPERATURE	68.609	
WALL TEMPERATURE	102.920	
WALL HEAT FLUX	.04665	
FREE STREAM DENSITY	.07610	
DENSITY OF FLUID AT WALL	.07146	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001792	
WALL/FREE STREAM DENSITY RATIO	.93901	
LOCATION REYNOLDS NUMBER (REX)	633186.30	
INPUT VALUE OF VELOCITY DELTA	.09200	
INPUT VALUE OF TEMPERATURE DELTA	.09500	
CALCULATED DELTA		.09485
DELTA .99.5% INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.02631	.02236
MOMENTUM THICKNESS (THETA)	.00975	.01103
ENERGY-DISSIPATION THICKNESS	.01544	.01783
ENTHALPY THICKNESS	.00058	.00077
SHAPE FACTOR 12 (DELSTAR/THETA)	2.69874	2.02599
SHAPE FACTOR 22 (ENERGY/THETA)	1.58341	1.61633
MOMENTUM THICKNESS REYNOLDS NUMBER	502.66	568.93
DISPLACEMENT THICKNESS REYNOLDS NUMBER	1356.56	1152.65
SKIN FRICTION COEFFICIENT	.003513	
FRICITION VELOCITY	4.29000	
LAW OF THE WALL CONSTANT (K)	.41000	
LA. OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		1.09360
CLAUSERS "DELTA" INTEGRAL	-.46714	-.49902
CLAUSERS "G" INTEGRAL	.41368	5.46998
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.02297	.02158
MOMENTUM THICKNESS - CONSTANT DENSITY	.01000	.01135
SHAPE FACTOR 12 - CONSTANT DENSITY	2.29770	1.90134

LOCATION -X- 12.28000

Z = +6 INCHES

Table 2.

JOB KL002 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 03/09/79

RUN NO. F. POINT 2. NO GRID

REDUCED PROFILE DATA

N	INCHES	Y	U	T	U/U'	THETA	U-LIF	UTAU	U(+)	T(+)	Y(+)
1	0.0000	0.0000	0.0000	0.0000	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0072	0.0072	0.0072	0.0072	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0144	0.0144	0.0144	0.0144	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0216	0.0216	0.0216	0.0216	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0288	0.0288	0.0288	0.0288	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0360	0.0360	0.0360	0.0360	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0432	0.0432	0.0432	0.0432	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0504	0.0504	0.0504	0.0504	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
9	0.0576	0.0576	0.0576	0.0576	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10	0.0648	0.0648	0.0648	0.0648	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
11	0.0720	0.0720	0.0720	0.0720	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
12	0.0792	0.0792	0.0792	0.0792	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
13	0.0864	0.0864	0.0864	0.0864	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
14	0.0936	0.0936	0.0936	0.0936	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
15	0.1008	0.1008	0.1008	0.1008	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
16	0.1080	0.1080	0.1080	0.1080	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
17	0.1152	0.1152	0.1152	0.1152	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
18	0.1224	0.1224	0.1224	0.1224	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
19	0.1296	0.1296	0.1296	0.1296	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20	0.1368	0.1368	0.1368	0.1368	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
21	0.1440	0.1440	0.1440	0.1440	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
22	0.1512	0.1512	0.1512	0.1512	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
23	0.1584	0.1584	0.1584	0.1584	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
24	0.1656	0.1656	0.1656	0.1656	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
25	0.1728	0.1728	0.1728	0.1728	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
26	0.1700	0.1700	0.1700	0.1700	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
27	0.1772	0.1772	0.1772	0.1772	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28	0.1844	0.1844	0.1844	0.1844	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
29	0.1916	0.1916	0.1916	0.1916	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
30	0.1988	0.1988	0.1988	0.1988	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
31	0.2060	0.2060	0.2060	0.2060	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
32	0.2132	0.2132	0.2132	0.2132	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
33	0.2204	0.2204	0.2204	0.2204	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
34	0.2276	0.2276	0.2276	0.2276	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
35	0.2348	0.2348	0.2348	0.2348	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
36	0.2420	0.2420	0.2420	0.2420	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
37	0.2492	0.2492	0.2492	0.2492	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
38	0.2564	0.2564	0.2564	0.2564	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
39	0.2636	0.2636	0.2636	0.2636	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
40	0.2708	0.2708	0.2708	0.2708	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
41	0.2780	0.2780	0.2780	0.2780	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
42	0.2852	0.2852	0.2852	0.2852	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
43	0.2924	0.2924	0.2924	0.2924	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
44	0.3000	0.3000	0.3000	0.3000	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Table 2.

JOB KLD02 TAPE 3166R- FILES C1-21, PUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT . 3.

NO GRID

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $y+=35$
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FREE STREAM VELOCITY	= 99.148	99.148
FREE STREAM TEMPERATURE	= 67.830	
WALL TEMPERATURE	= 101.715	
WALL HEAT FLUX	= .04653	
FREE STREAM DENSITY	= .07671	
FREE STREAM KINEMATIC VISCOSITY	= .0001589	
DENSITY OF FLUID AT WALL	= .07259	
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001773	
WALL/FREE STREAM DENSITY RATIO	= .93965	
LOCATION REYNOLDS NUMBER (REX)	= 634545.71	
INPUT VALUE OF VELOCITY DELTA	= .09700	
INPUT VALUE OF TEMPERATURE DELTA	= .09700	
CALCULATED DELTA		.07975
DELTA 99.5% INPUT	= .00000	
DISPLACEMENT THICKNESS (DELSTAR)	= .02503	.02257
MOMENTUM THICKNESS, (THETA)	= .00937	.01049
ENERGY-DISSIPATION THICKNESS	= .01492	.01688
ENTHALPY THICKNESS	= .00056	.00073
SHAPE FACTOR 12 (DELSTAR/THETA)	= 2.67107	2.10407
SHAPE FACTOR 12 (ENERGY/THETA)	= 1.59226	1.60945
MOMENTUM THICKNESS REYNOLDS NUMBER	= 487.39	545.56
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 1301.84	1147.89
SKIN FRICTION COEFFICIENT	= .002893	
FRICTION VELOCITY	= 3.89020	
LAW OF THE WALL CONSTANT (K)	= .41000	
LAW OF THE WALL CONSTANT (C)	= 5.00000	
WAKE STRENGTH		1.70859
CLAUSERS "DELTA" INTEGRAL	= -.48284	-.54461
CLAUSERS "C" INTEGRAL	= 9.65825	6.87522
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .02171	.02137
MOMENTUM THICKNESS - CONSTANT DENSITY	= .00961	.01078
SHAPE FACTOR 12 - CONSTANT DENSITY	= 2.26000	1.98145

LOCATION -X- 12.20000

Z = -6 INCHES

Table 3.

JOB KLDC2 TAPE 3166R- FILES 01-21, PUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 3. NO GRID

REDUCED PAGEFILE DATA

N	Y	U	T	U	U	U	U	U	U	U	U	U	Y
1	CHES	FT/SEC	DEG.F	U/U'	THFTA	UTAU	UEUE	UUE	UTAU	UUE	UUE	UUE	Y
2	INC	F7	96.02	.141	-72.435	4.35	1.41	3.1	3.052	6.913	6.913	6.913	1.110
3	123	11.02	96.02	.154	-72.087	2.087	3.09	3.09	3.09	7.550	7.550	7.550	11.938
4	456	13.22	96.02	.183	-21.352	1.352	4.013	4.013	4.013	8.984	8.984	8.984	15.766
5	678	16.02	95.53	.162	-20.541	5.541	4.946	4.946	4.946	10.038	10.038	10.038	15.722
6	901	19.24	94.53	.194	-19.571	5.571	7.012	7.012	7.012	11.364	11.364	11.364	15.713
7	112	22.27	92.487	.224	-18.375	6.375	8.624	8.624	8.624	12.637	12.637	12.637	17.224
8	131	22.71	90.21	.274	-17.362	6.362	8.338	8.338	8.338	13.645	13.645	13.645	17.213
9	139	33.05	88.502	.319	-16.967	6.967	8.012	8.012	8.012	14.637	14.637	14.637	17.203
10	158	38.27	86.512	.338	-15.649	6.449	7.913	7.913	7.913	15.680	15.680	15.680	17.193
11	162	42.01	84.365	.386	-14.475	5.475	7.413	7.413	7.413	16.637	16.637	16.637	17.183
12	175	46.02	84.115	.473	-13.574	5.574	7.012	7.012	7.012	17.012	17.012	17.012	17.012
13	204	50.02	84.015	.507	-12.574	5.574	6.913	6.913	6.913	17.913	17.913	17.913	17.913
14	224	52.02	81.557	.534	-11.778	6.778	7.550	7.550	7.550	18.907	18.907	18.907	18.907
15	259	55.02	81.557	.577	-10.985	6.853	8.521	8.521	8.521	19.907	19.907	19.907	19.907
16	289	57.21	81.557	.613	-9.972	6.972	8.213	8.213	8.213	20.907	20.907	20.907	20.907
17	313	67.02	78.96	.640	-8.824	7.239	7.913	7.913	7.913	21.907	21.907	21.907	21.907
18	324	67.02	78.557	.676	-7.725	7.550	7.913	7.913	7.913	22.907	22.907	22.907	22.907
19	362	76.02	74.557	.775	-6.821	8.213	7.913	7.913	7.913	23.907	23.907	23.907	23.907
20	404	84.79	71.956	.878	-5.895	8.950	7.913	7.913	7.913	24.907	24.907	24.907	24.907
21	424	90.23	70.320	.911	-4.266	9.266	7.913	7.913	7.913	25.907	25.907	25.907	25.907
22	456	92.73	69.020	.927	-3.707	9.707	7.913	7.913	7.913	26.907	26.907	26.907	26.907
23	471	94.27	69.020	.969	-2.607	10.607	7.913	7.913	7.913	27.907	27.907	27.907	27.907
24	504	96.64	68.156	.980	-1.611	11.611	7.913	7.913	7.913	28.907	28.907	28.907	28.907
25	529	97.63	67.986	.995	-0.134	12.134	7.913	7.913	7.913	29.907	29.907	29.907	29.907
26	544	98.03	67.986	.998	-0.154	12.516	7.913	7.913	7.913	30.907	30.907	30.907	30.907
27	568	98.53	67.986	1.000	-0.337	13.489	8.489	8.489	8.489	31.907	31.907	31.907	31.907
28	592	99.03	67.986	1.000	-0.306	14.493	8.489	8.489	8.489	32.907	32.907	32.907	32.907
29	616	99.53	67.986	1.000	-0.305	15.492	8.489	8.489	8.489	33.907	33.907	33.907	33.907
30	640	99.93	67.986	1.000	-0.305	16.491	8.489	8.489	8.489	34.907	34.907	34.907	34.907
31	664	99.93	67.986	1.000	-0.305	17.490	8.489	8.489	8.489	35.907	35.907	35.907	35.907
32	688	99.93	67.986	1.000	-0.305	18.489	8.489	8.489	8.489	36.907	36.907	36.907	36.907
33	712	99.93	67.986	1.000	-0.305	19.488	8.489	8.489	8.489	37.907	37.907	37.907	37.907
34	736	99.93	67.986	1.000	-0.305	20.487	8.489	8.489	8.489	38.907	38.907	38.907	38.907
35	760	99.93	67.986	1.000	-0.305	21.486	8.489	8.489	8.489	39.907	39.907	39.907	39.907
36	784	99.93	67.986	1.000	-0.305	22.485	8.489	8.489	8.489	40.907	40.907	40.907	40.907
37	808	99.93	67.986	1.000	-0.305	23.484	8.489	8.489	8.489	41.907	41.907	41.907	41.907
38	832	99.93	67.986	1.000	-0.305	24.483	8.489	8.489	8.489	42.907	42.907	42.907	42.907
39	856	99.93	67.986	1.000	-0.305	25.482	8.489	8.489	8.489	43.907	43.907	43.907	43.907
40	880	99.93	67.986	1.000	-0.305	26.481	8.489	8.489	8.489	44.907	44.907	44.907	44.907
41	904	99.93	67.986	1.000	-0.305	27.480	8.489	8.489	8.489	45.907	45.907	45.907	45.907
42	928	99.93	67.986	1.000	-0.305	28.479	8.489	8.489	8.489	46.907	46.907	46.907	46.907
43	952	99.93	67.986	1.000	-0.305	29.478	8.489	8.489	8.489	47.907	47.907	47.907	47.907
44	976	99.93	67.986	1.000	-0.305	30.477	8.489	8.489	8.489	48.907	48.907	48.907	48.907
45	1000	99.93	67.986	1.000	-0.305	31.476	8.489	8.489	8.489	49.907	49.907	49.907	49.907

Table 3.

JOB KLDC2 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 C3/C9/79

RUN NO. 5. POINT 4. NO GRID

BOUNDARY LAYER PROPERTIES

LINEAR INTERPOLATION	STANDARD SUBLAYER FUNCTION FROM TO WALL
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FREE STREAM VELOCITY	99.094	99.094
FREE STREAM TEMPERATURE	68.013	
WALL TEMPERATURE	82.460	
WALL HEAT FLUX	.25137	
FREE STREAM DENSITY	.76569	
FREE STREAM KINEMATIC VISCOSITY	.0001592	
DENSITY OF FLUID AT WALL	.07464	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001667	
WALL/FREE STREAM DENSITY RATIO	.97335	
LOCATION REYNOLDS NUMBER (REX)	1880639.66	
INPUT VALUE OF VELOCITY DELTA	.52000	
INPUT VALUE OF TEMPERATURE DELTA	.56000	
CALCULATED DELTA		.48318
DELTA 99.5% INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.07355	.07358
MOMENTUM THICKNESS (THETA)	.05077	.05097
ENERGY-DISSIPATION THICKNESS	.08966	.08981
ENTHALPY THICKNESS	.02178	.02178
SHAPE FACTOR 12 (DELSTAR/THETA)	1.44885	1.44356
SHAPE FACTOR 32 (ENERGY/THETA)	1.76624	1.76201
MOMENTUM THICKNESS REYNOLDS NUMBER	2637.42	2647.98
DISPLACEMENT THICKNESS REYNOLDS NUMBER	3821.20	3822.51
SKIN FRICTION COEFFICIENT	.003330	
FRICTION VELOCITY	4.09868	
LAW OF THE WALL CONSTANT (K)	.41000	
LAW OF THE WALL CONSTANT (C)	5.00000	.48255
WAKE STRENGTH		
CLAUSERS "DELTA" INTEGRAL	-1.60637	-1.73577
CLAUSERS "F" INTEGRAL	12.05140	11.94194
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.06911	.07170
MOMENTUM THICKNESS - CONSTANT DENSITY	.05115	.05136
SHAPE FACTOR 12 - CONSTANT DENSITY	1.35095	1.39775

LOCATION -X- 36.20000

Z = CENTERLINE

Table 4.

JOE KLDC2 TAPE 3166R- FILE C1-21, RUNS 5.C1-5.21 03/09/79

RUN NO. 5. POINT 4. NO GRID

REDUCED PROFILE DATA

N	Y INCHES	Y/	U	T	U/U/F	THETA	U-UF	U(+)	T(+)	Y(+)
1	.3653	.0111	37.68	77.78	.379	.324	-15.014	9.173	6.683	10.918
2	.3563	.0113	40.40	77.29	.408	.358	-14.320	9.857	7.394	12.067
3	.3573	.0115	44.12	76.03	.445	.383	-13.413	10.764	7.909	15.015
4	.3563	.0117	46.36	76.62	.474	.404	-12.725	11.457	8.352	17.064
5	.3598	.0124	50.70	76.21	.533	.432	-11.894	12.283	8.930	20.136
6	.0116	.0124	52.76	75.62	.532	.460	-11.305	12.676	9.490	23.823
7	.0126	.0126	53.81	75.59	.543	.476	-10.477	13.120	9.819	25.872
8	.0146	.0130	55.48	75.28	.560	.497	-10.641	13.536	10.269	29.969
9	.0164	.0134	56.49	75.13	.570	.508	-10.794	13.783	10.492	33.656
10	.0187	.0136	57.68	74.95	.582	.520	-10.110	14.067	10.733	37.548
11	.0206	.0141	58.32	74.84	.589	.528	-9.947	14.230	10.895	40.621
12	.0211	.0144	59.76	74.74	.595	.534	-9.768	14.399	11.032	43.284
13	.0232	.0148	59.76	74.59	.602	.545	-9.612	14.565	11.256	47.585
14	.0252	.0152	60.35	74.47	.609	.553	-9.464	14.713	11.422	51.682
15	.0274	.0157	61.13	74.35	.617	.561	-9.262	14.915	11.594	56.129
16	.0289	.0160	61.45	74.27	.623	.567	-9.184	14.993	11.705	59.261
17	.0356	.0188	63.24	73.05	.638	.589	-8.748	15.429	12.176	72.986
18	.0424	.0188	64.05	72.65	.655	.610	-8.330	15.647	12.693	86.916
19	.0493	.0192	66.43	73.45	.670	.624	-7.969	16.208	12.584	101.750
20	.0553	.0195	67.42	73.26	.680	.637	-7.729	16.448	13.155	113.340
21	.0624	.0198	68.66	73.06	.693	.651	-7.421	16.750	13.436	127.884
22	.0695	.0202	69.74	72.97	.704	.664	-7.163	17.014	13.724	141.814
23	.0752	.0206	70.66	72.73	.713	.670	-6.938	17.279	13.841	154.104
24	.0822	.0217	71.78	72.56	.724	.679	-6.665	17.512	14.021	168.034
25	.0897	.0214	72.49	72.45	.733	.689	-6.445	17.732	14.273	182.773
26	.0956	.0218	73.49	72.39	.742	.697	-6.247	17.920	14.473	195.893
27	.1026	.0212	74.41	72.20	.751	.710	-6.022	18.155	14.650	210.232
28	.1096	.0227	75.29	72.11	.759	.716	-5.818	18.359	14.893	224.571
29	.1153	.0239	75.95	72.06	.766	.721	-5.659	18.518	15.070	236.247
30	.1222	.0253	76.74	71.96	.774	.730	-5.455	18.722	15.241	244.311
31	.1290	.0267	77.50	71.85	.782	.738	-5.269	18.916	15.405	264.593
32	.1464	.0203	79.37	71.75	.801	.755	-4.811	19.366	15.595	299.053
33	.1638	.0339	81.11	71.28	.819	.774	-4.388	19.789	15.975	335.596
34	.1910	.0375	82.16	71.05	.835	.789	-3.969	20.188	16.302	370.702
35	.1990	.0412	84.54	70.90	.853	.807	-3.552	20.625	16.669	407.702
36	.2160	.0447	85.90	70.84	.866	.823	-3.229	20.948	17.000	442.525
37	.2342	.0495	87.09	70.37	.883	.837	-2.831	21.346	17.281	479.807
38	.2510	.0520	88.93	70.11	.898	.855	-2.504	21.673	17.657	514.221
39	.2694	.0588	90.75	69.91	.909	.869	-2.199	21.978	17.944	551.912
40	.2800	.0620	91.26	69.70	.921	.883	-1.911	22.266	18.233	585.916
41	.3042	.0672	92.46	69.54	.933	.895	-1.620	22.557	18.483	623.198
42	.3394	.0702	94.67	69.13	.955	.923	-1.079	23.008	19.055	695.303
43	.3740	.0774	96.42	69.79	.973	.946	-0.653	23.524	19.539	766.179
44	.4295	.0847	97.69	68.89	.986	.968	-0.343	23.874	19.989	837.875
45	.4445	.0920	98.42	68.27	.993	.982	-0.165	24.012	20.286	910.594
46	.4722	.0992	98.80	68.08	.998	.992	-0.059	24.118	20.475	981.675
47	.5144	1.0146	99.55	68.04	1.000	1.000	-0.010	24.167	20.614	1033.780
48	.5493	1.137	99.79	67.99	1.000	1.002	-0.002	24.177	20.684	1125.271
49	.5646	1.212	99.99	68.71	1.000	1.000	-0.001	24.176	20.649	1197.581
50	.6192	1.282	99.16	68.72	1.000	1.000	-0.001	24.178	20.639	1268.457
51	.6548	1.354	99.16	68.63	1.000	1.001	-0.010	24.167	20.662	1340.567
52	.6892	1.4256	99.26	68.01	1.000	1.001	-0.014	24.163	20.661	1411.844
53	.7263	1.4999	99.26	68.01	1.000	1.000	-0.010	24.167	20.655	1483.749
54	.7594	1.572	99.33	68.02	1.000	1.000	-0.016	24.161	20.637	1555.649
55	.7944	1.644	99.34	67.98	1.000	1.002	-0.014	24.163	20.701	1627.345
56	.8294	1.717	98.96	68.04	1.000	1.001	-0.036	24.141	20.661	1699.740
57	.8644	1.780	98.96	68.04	1.000	1.000	-0.033	24.144	20.627	1770.736
58	.9394	1.8664	98.98	68.04	1.000	1.000	-0.036	24.142	20.635	1842.431
59	.9341	1.933	98.95	68.01	1.000	1.000	-0.031	24.146	20.629	1913.512
60	.9690	2.006	98.97	68.03	1.000	1.000	-0.031	24.146	20.655	1985.003
61	1.0041	2.078	98.97	68.01	1.000	1.000	-0.031	24.146	20.655	2056.903
62	1.2893	2.666	98.95	68.07	1.000	1.000	-0.035	24.146	20.635	2241.119
63	1.5732	3.266	98.95	68.03	1.000	1.000	-0.047	24.130	20.630	2326.769
64	1.8614	3.952	98.01	68.01	1.000	1.001	-0.046	24.131	20.660	2313.033
65	2.1468	4.443	98.97	68.03	1.000	1.000	-0.055	24.122	20.628	4397.659
66	2.4322	5.034	98.97	68.01	1.000	1.000	-0.051	24.135	20.579	4982.784
67	2.7180	5.625	98.92	68.11	1.000	1.000	-0.042	24.135	20.508	5567.729
68	3.0040	6.217	98.79	68.10	1.000	1.000	-0.075	24.102	20.533	6153.584

Table 4.

JOB KLD02 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 03/09/79

RUN NO. 5. POTNT 5. NO GRID

BOUNDARY LAYER PROPERTIES

STANDARD
LINEAR SUBLAYER
INTERPOLATION FUNCTION FROM
TO WALL WALL TO $y^+=35$

FREE STREAM VELOCITY	=	98.420	98.420
FREE STREAM TEMPERATURE	=	68.158	
WALL TEMPERATURE	=	82.650	
WALL HEAT FLUX	=	.CE116	
FREE STREAM DENSITY	=	.C7667	
FREE STREAM KINEMATIC VISCOSITY	=	.C001590	
DENSITY OF FLUID AT WALL	=	.C7463	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.C001668	
WALL/FREE STREAM DENSITY RATIO	=	.97337	
LOCATION REYNOLDS NUMBER (REX)	=	1866.947.52	
INPUT VALUE OF VELOCITY DELTA	=	.52000	
INPUT VALUE OF TEMPERATURE DELTA	=	.56000	
CALCULATED DELTA	=		.49236
DELTA 99.5% INPUT	=	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	=	.07511	.07530
MOMENTUM THICKNESS (THETA)	=	.05208	.05217
ENERGY-DISSIPATION THICKNESS	=	.09190	.09191
ENTHALPY THICKNESS	=	.00181	.00181
SHAPE FACTOR 12 (DELSTAR/THETA)	=	1.44222	1.44329
SHAPE FACTOR 32 (ENERGY/THETA)	=	1.76467	1.76165
MOMENTUM THICKNESS REYNOLDS NUMBER	=	2685.65	2690.71
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	3873.60	3883.48
SKIN FRICTION COEFFICIENT	=	.003309	
FRICITION VELOCITY	=	4.05792	
LAW OF THE WALL CONSTANT (K)	=	.41000	
LAW OF THE WALL CONSTANT (C)	=	5.00000	
WAKE STRENGTH	=		.49413
CLAUSER'S "DELTA" INTEGRAL	=	-1.67262	-1.78252
CLAUSER'S "F" INTEGRAL	=	12.25304	12.30926
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.07114	.07349
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.05247	.05257
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.35571	1.39805

LOCATION -X- 36.20000

Z = +6 INCHES

Table 5.

JOE KLD02 TAPE 3166R- FILES C1-21, RUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 5. NO GRID

REDUCED PROFILE DATA

N	INCHES	Y/	U	T	U/U'	THETA	UTAU	U(+)	T(+)	V(+)
1	004478	0.009	35.68	78.57	.363	.279	-15.460	8.793	5.719	8.778
2	005555	0.011	37.02	77.93	.376	.223	-15.130	9.124	6.635	11.210
3	005666	0.013	40.96	77.43	.415	.358	-14.165	10.369	7.742	13.237
4	005666	0.015	44.51	77.73	.452	.386	-13.263	10.968	7.918	15.264
5	005666	0.018	47.56	76.73	.481	.407	-12.583	11.671	8.346	17.494
6	005666	0.021	50.54	76.17	.514	.445	-11.790	12.464	9.139	20.738
7	005666	0.024	52.34	75.56	.547	.467	-11.357	12.897	9.576	23.081
8	005666	0.026	54.01	75.75	.558	.474	-11.119	13.135	9.724	25.603
9	005666	0.029	56.67	75.43	.569	.496	-10.723	13.530	10.183	30.265
10	005666	0.034	58.71	75.22	.573	.511	-10.452	13.602	10.487	33.500
11	005666	0.034	58.86	75.02	.575	.527	-10.237	14.017	10.802	37.365
12	005666	0.034	59.72	74.80	.588	.541	-9.989	14.375	11.100	41.000
13	005666	0.034	59.76	74.63	.587	.552	-9.753	14.554	11.326	43.720
14	005666	0.034	59.69	74.47	.587	.563	-9.543	14.711	11.556	47.699
15	005666	0.036	60.23	74.36	.612	.570	-9.412	14.841	11.772	51.754
16	005666	0.036	60.77	74.21	.617	.574	-9.278	14.976	11.775	55.807
17	005666	0.037	62.47	74.07	.635	.501	-8.863	15.394	12.114	59.051
18	005666	0.037	64.18	73.76	.652	.611	-8.438	15.616	12.534	66.620
19	005666	0.037	66.21	73.57	.667	.627	-8.082	16.172	12.858	70.010
20	005666	0.037	66.30	73.39	.679	.638	-7.766	16.468	13.079	72.770
21	005666	0.037	69.18	73.16	.692	.644	-7.476	16.778	13.409	75.560
22	005666	0.037	70.04	72.90	.713	.664	-7.264	17.047	13.621	78.353
23	005666	0.037	71.04	72.74	.712	.672	-6.933	17.271	13.777	81.314
24	005666	0.037	71.73	72.57	.722	.683	-6.747	17.507	14.026	86.300
25	005666	0.037	72.57	72.40	.722	.692	-6.489	17.765	14.206	88.896
26	005666	0.037	72.76	72.46	.734	.702	-6.323	17.931	14.398	94.059
27	005666	0.037	73.67	72.31	.746	.713	-6.105	18.154	14.621	207.438
28	005666	0.037	74.40	72.01	.757	.719	-5.905	18.349	14.764	221.831
29	005666	0.037	75.25	71.14	.765	.724	-5.705	18.553	14.857	231.791
30	005666	0.037	75.03	70.50	.771	.734	-5.543	18.711	15.063	248.786
31	005666	0.037	75.03	70.50	.771	.743	-5.345	18.909	15.253	262.374
32	005666	0.037	76.73	71.06	.780	.752	-4.903	19.351	15.589	297.443
33	005666	0.037	76.73	71.63	.798	.760	-4.466	19.766	15.959	332.918
34	005666	0.037	76.86	71.37	.816	.778	-4.075	20.179	16.271	361.582
35	005666	0.037	81.01	71.15	.832	.793	-3.667	20.561	16.616	404.274
36	005666	0.037	81.44	70.90	.848	.810	-3.321	20.972	16.901	439.344
37	005666	0.037	84.94	70.70	.862	.824	-2.958	21.296	17.217	475.629
38	005666	0.037	84.94	70.50	.875	.839	-2.643	21.611	17.405	515.483
39	005666	0.037	87.55	70.23	.891	.855	-2.309	21.945	17.750	546.782
40	005666	0.037	89.05	70.11	.916	.880	-2.034	22.214	18.044	581.341
41	005666	0.037	90.14	69.90	.929	.892	-1.731	22.523	18.296	616.921
42	005666	0.037	91.40	69.72	.938	.914	-1.422	23.032	18.754	667.872
43	005666	0.037	93.45	69.45	.943	.938	-1.177	23.462	19.250	759.224
44	005666	0.037	95.49	69.25	.953	.950	-1.14	23.840	19.617	829.772
45	005666	0.037	96.71	69.01	.958	.953	-1.176	24.013	19.925	972.177
46	005666	0.037	97.73	68.73	.963	.955	-1.10	24.244	20.483	1043.228
47	005666	0.037	98.73	68.51	.968	.958	-1.055	24.265	20.848	1111.572
48	005666	0.037	99.73	68.23	.976	.963	-1.010	24.289	21.223	1155.878
49	005666	0.037	100.46	68.01	.980	.968	-1.011	24.305	21.523	1236.920
50	005666	0.037	101.16	68.16	.984	.970	-1.011	24.326	21.533	1397.778
51	005666	0.037	101.87	68.16	.988	.976	-1.011	24.346	21.740	1466.728
52	005666	0.037	102.58	68.15	.992	.980	-1.014	24.369	21.952	1519.678
53	005666	0.037	103.29	68.15	.993	.983	-1.014	24.389	22.160	1610.426
54	005666	0.037	104.01	68.15	.998	.986	-1.014	24.408	22.368	1681.376
55	005666	0.037	104.73	68.15	.998	.991	-1.014	24.428	22.576	1752.934
56	005666	0.037	105.43	68.14	.998	.995	-1.014	24.448	22.784	1823.682
57	005666	0.037	106.14	68.13	.998	.998	-1.014	24.468	22.992	1894.834
58	005666	0.037	106.85	68.12	.998	.998	-1.014	24.488	23.200	1965.176
59	005666	0.037	107.56	68.12	.998	.998	-1.014	24.508	23.408	2036.329
60	005666	0.037	108.27	68.12	.998	.998	-1.014	24.528	23.616	2113.660
61	005666	0.037	109.94	68.11	.999	.999	-1.014	24.548	23.823	2193.830
62	005666	0.037	110.60	68.11	.999	.999	-1.014	24.568	24.031	2273.990
63	005666	0.037	112.19	68.12	.999	.999	-1.014	24.588	24.239	2352.597
64	005666	0.037	113.20	68.12	.999	.999	-1.014	24.608	24.437	2431.999
65	005666	0.037	114.71	68.12	.999	.999	-1.014	24.628	24.635	2510.858
66	005666	0.037	115.75	68.12	.999	.999	-1.014	24.648	24.833	2609.622
67	005666	0.037	116.71	68.12	.999	.999	-1.014	24.668	25.031	2693.990
68	005666	0.037	117.71	68.12	.999	.999	-1.014	24.688	25.229	2781.830
69	005666	0.037	118.71	68.12	.999	.999	-1.014	24.708	25.427	2869.622

Table 5.

JOB KLD02 TAPE 3166R- FILES C1-21, RUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 7. NO GRID

BOUNDARY LAYER PROPERTIES

LINEAR INTERPOLATION	STANDARD SUELAYER FUNCTION FROM TO WALL
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FREE STREAM VELOCITY	=	98.761	98.761
FREE STREAM TEMPERATURE	=	68.530	
WALL TEMPERATURE	=	83.510	
WALL HEAT FLUX	=	.05148	
FREE STREAM DENSITY	=	.07661	
FREE STREAM KINEMATIC VISCOSITY	=	.0001592	
DENSITY OF FLUID AT WALL	=	.07450	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.0001673	
WALL/FREE STREAM DENSITY RATIO	=	.97242	
LOCATION REYNOLDS NUMBER (REX)	=	2053001.96	
INPUT VALUE OF VELOCITY DELTA	=	.59000	
INPUT VALUE OF TEMPERATURE DELTA	=	.59000	
CALCULATED DELTA	=		.54325
DELTA 99.5% INPUT	=	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	=	.08240	.08254
MOMENTUM THICKNESS (THETA)	=	.05725	.05743
ENERGY-DISSIPATION THICKNESS	=	.10114	.10124
ENTHALPY THICKNESS	=	.00202	.00202
SHAPE FACTOR 1? (DELSTAR/THETA)	=	1.43940	1.43740
SHAPE FACTOR 32 (ENERGY/THETA)	=	1.76681	1.76297
MOMENTUM THICKNESS REYNOLDS NUMBER	=	2958.93	2968.18
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	4259.09	4266.46
SKIN FRICTION COEFFICIENT	=	.003237	
FRICITION VELOCITY	=	4.02944	
LAW OF THE WALL CONSTANT (K)	=	.41000	
LAW OF THE WALL CONSTANT (C)	=	5.00000	
WAKE STRENGTH	=		.50245
CLAUSER'S "DELTA" INTEGRAL	=	-1.83953	-1.07363
CLAUSER'S "C" INTEGRAL	=	13.63422	13.60837
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.07772	.08052
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.05769	.05787
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.34724	1.39143

LOCATION -X- 40.30000

Z = CENTERLINE

Table 6.

JOB KLD02 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 03/09/79

RUN NO.

5.

POINT

7.

NO GRID

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/U _F	THETA	U-UE	U(+1)	T(+1)	V(+1)
1	•C0053	•J10	38.24	76.90	.387	.308	-15.021	9.489	6.456	10.457
2	•E0055	•J12	40.60	78.27	.411	.350	-14.433	10.077	7.338	13.105
3	•D0065	•J14	43.90	77.85	.445	.378	-13.615	10.895	7.923	15.112
4	•D0095	•J16	46.89	77.51	.475	.401	-12.874	11.676	8.801	17.119
5	•D1111	•J20	48.97	77.22	.496	.420	-12.357	12.153	8.830	19.126
6	•C1123	•J23	51.60	76.81	.523	.447	-11.695	12.815	9.371	22.337
7	•C1132	•J25	52.70	76.53	.534	.466	-11.412	13.098	9.771	24.746
8	•C1156	•J29	53.01	76.31	.546	.481	-11.130	13.379	10.082	26.753
9	•C1175	•J32	56.57	76.77	.561	.503	-10.761	13.749	10.486	31.168
10	•C1197	•J32	57.61	76.60	.583	.517	-10.472	14.038	10.831	35.182
11	•C1211	•J34	58.24	75.52	.590	.528	-10.212	14.298	11.069	39.587
12	•C1223	•J41	58.60	75.36	.594	.533	-10.057	14.453	11.184	42.407
13	•C1247	•J46	59.70	75.13	.601	.544	-9.952	14.557	11.399	44.815
14	•C1267	•J49	60.30	75.03	.609	.567	-9.774	14.776	11.731	49.632
15	•C1287	•J53	60.70	74.92	.615	.568	-9.595	14.915	11.909	53.646
16	•C1302	•J56	61.21	74.85	.620	.573	-9.425	15.085	12.020	57.660
17	•C1322	•J56	62.70	74.57	.635	.578	-9.318	15.162	12.119	60.672
18	•C1345	•J58	64.22	74.34	.650	.597	-8.935	15.575	12.558	73.916
19	•C1358	•J59	65.66	74.12	.665	.612	-8.572	15.938	12.828	77.965
20	•C1366	•J64	66.65	73.97	.675	.627	-8.214	16.296	13.136	102.014
21	•C1333	•J117	67.65	73.78	.684	.637	-7.966	16.542	13.350	112.654
22	•C1357	•J141	68.00	73.59	.695	.649	-7.734	16.776	13.681	127.101
23	•C1358	•J141	68.43	73.51	.703	.662	-7.465	17.045	13.885	141.952
24	•C1367	•J154	70.48	73.37	.714	.677	-7.019	17.220	13.997	153.933
25	•C1367	•J167	71.39	73.23	.723	.686	-6.794	17.401	14.196	168.248
26	•C1367	•J177	71.99	73.11	.729	.694	-6.643	17.867	14.568	182.092
27	•C1374	•J190	72.89	72.98	.738	.703	-6.421	18.089	14.732	193.331
28	•C1373	•J203	73.53	72.87	.745	.710	-6.262	18.248	14.886	207.580
29	•C1373	•J214	74.13	72.76	.751	.717	-6.112	18.398	15.039	221.428
30	•C1373	•J226	75.00	72.61	.759	.727	-5.896	18.614	15.248	233.470
31	•C1373	•J241	75.66	72.51	.766	.735	-5.729	18.761	15.400	248.321
32	•C1373	•J271	77.25	72.29	.783	.749	-5.315	19.195	15.720	262.571
33	•C1473	•J304	79.07	72.05	.801	.765	-4.887	19.623	16.003	295.686
34	•C1651	•J336	80.60	71.83	.816	.780	-4.507	20.003	16.344	331.409
35	•C1624	•J369	82.06	71.60	.831	.795	-4.144	20.366	16.671	366.130
36	•C2007	•J401	83.55	71.37	.846	.810	-3.773	20.737	16.983	402.857
37	•C2178	•J423	84.02	71.18	.860	.823	-3.435	21.075	17.253	437.376
38	•C2529	•J465	86.14	72.07	.872	.837	-3.132	21.378	17.552	472.298
39	•C2709	•J499	87.51	70.81	.886	.848	-2.791	21.719	17.779	507.420
40	•C2877	•J530	88.68	70.63	.898	.860	-2.502	22.028	18.030	543.746
41	•C3050	•J563	90.01	70.39	.911	.876	-2.172	22.338	18.366	577.463
42	•C3406	•J627	92.10	70.22	.933	.911	-1.654	22.856	18.884	603.438
43	•C3756	•J691	94.06	69.71	.952	.971	-1.168	23.342	19.319	753.875
44	•C4159	•J756	95.52	69.40	.968	.942	-0.765	23.733	19.741	824.721
45	•C4455	•J820	96.97	69.13	.982	.965	-0.446	24.064	20.123	894.161
46	•C4806	•J885	97.84	68.92	.991	.974	-0.228	24.282	20.417	964.606
47	•C5153	•J949	98.38	68.75	.996	.985	-0.096	24.467	20.660	1034.247
48	•C5506	•J1013	98.59	68.60	.998	.996	-0.043	24.414	20.871	1104.892
49	•C5853	•J077	98.72	68.54	1.000	1.000	-0.011	24.499	20.956	1174.735
50	•C6206	•J142	98.77	68.54	1.000	1.000	-0.006	24.518	20.983	1315.222
51	•C6553	•J206	98.79	68.52	1.000	1.001	-0.006	24.518	20.983	1315.222
52	•C6936	•J271	98.72	68.53	1.000	1.000	-0.006	24.500	20.958	1386.268
53	•C7255	•J336	98.73	68.55	1.000	1.000	-0.008	24.500	20.937	1456.111
54	•C7604	•J464	98.75	68.58	1.000	1.000	-0.008	24.506	20.888	1526.153
55	•C7953	•J464	98.68	68.61	1.000	1.000	-0.019	24.491	20.858	1596.196
56	•C8339	•J530	98.72	68.61	1.000	1.000	-0.011	24.499	20.856	1667.684
57	•C8653	•J593	98.73	68.61	1.000	1.000	-0.009	24.501	20.844	1737.684
58	•C9053	•J657	98.64	68.61	1.000	1.000	-0.030	24.479	20.833	1877.572
59	•C9353	•J722	98.64	68.62	1.000	1.000	-0.028	24.492	20.762	1948.610
60	•C9709	•J787	98.65	68.67	1.000	1.000	-0.045	24.465	20.818	2590.445
61	•C10058	•J851	98.58	68.65	1.000	1.000	-0.047	24.463	20.717	3164.734
62	•C10291	•J2376	98.61	68.63	1.000	1.000	-0.053	24.457	20.717	3738.226
63	•C105765	•J902	98.57	68.71	1.000	1.000	-0.053	24.457	20.703	4311.414
64	•C108626	•J429	98.55	68.71	1.000	1.000	-0.053	24.457	20.726	4884.001
65	•C114626	•J954	98.54	68.72	1.000	1.000	-0.056	24.478	20.726	5458.392
66	•C114336	•J480	98.63	68.70	1.000	1.000	-0.034	24.476	20.726	5458.392
67	•C117197	•J006	98.53	68.70	1.000	1.000	-0.053	24.457	20.710	6031.982
68	•C110055	•J532	98.55	68.71	1.000	1.000	-0.053	24.457	20.710	6031.982

Table 6.

JOE KLD02 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 03/29/79

RUN NO. E. POTNT S.

NO GRID

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y^+ = 35$
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FREE STREAM VELOCITY	=	98.660
FREE STREAM TEMPERATURE	=	68.638
WALL TEMPERATURE	=	83.642
WALL HEAT FLUX	=	.000097
FREE STREAM DENSITY	=	.07660
FREE STREAM KINEMATIC VISCOSITY	=	.0001593
DENSITY OF FLUID AT WALL	=	.07448
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.0001674
WALL/FREE STREAM DENSITY RATIO	=	.97239
LOCATION REYNOLDS NUMBER (REX)	=	2080113.22
INPUT VALUE OF VELOCITY DELTA	=	.59000
INPUT VALUE OF TEMPERATURE DELTA	=	.63000
CALCULATED DELTA	=	.55111
DELTA 99.5% INPUT	=	.00000
DISPLACEMENT THICKNESS (DELSTAR)	=	.08371
MOMENTUM THICKNESS (THETA)	=	.05843
ENERGY-DISSIPATION THICKNESS	=	.10321
ENTHALPY THICKNESS	=	.00201
SHAPE FACTOR 12 (DELSTAR/THETA)	=	1.43257
SHAPE FACTOR 32 (ENERGY/THETA)	=	1.76522
MOMENTUM THICKNESS REYNOLDS NUMBER	=	3016.09
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	4320.77
SKIN FRICTION COEFFICIENT	=	.003219
FRICITION VFLOCITY	=	4.0138E
LAW OF THE WALL CONSTANT (K)	=	.41000
LAW OF THE WALL CONSTANT (C)	=	5.00000
WAKE STRENGTH	=	.51173
CLAUSERS "DELTA" INTEGRAL	=	-1.90178
CLAUSERS "G" INTEGRAL	=	13.79419
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.07954
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.05887
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.35106

LOCATION -X- 40.30000

Z = +6 INCHES

Table 7.

JCF KLD02 TAPE 3166P- FILES 01-21, RUNS 5.01-5.21 03/09/79

RUN NO. S. POINT B. NO GRID

REFLECTED PROFILE DATA

N	Y INCHES	Y'	U	T	U/U'	THFTA	UTAU	U(+)	T(+)	V(+)
1	• 0047	• 376	36.45	79. P3	• 360	• 254	-15.499	9.081	5.362	8.653
2	• 0054	• 371	36.77	79. C2	• 373	• 376	-15.418	9.162	6.499	10.851
3	• 0064	• 400	40.12	78.42	• 407	• 348	-14.565	9.905	7.350	12.849
4	• 0075	• 414	43.73	77.89	• 443	• 324	-13.684	10.806	8.632	15.044
5	• 0084	• 415	46.71	77.51	• 469	• 409	-13.642	11.572	9.459	16.846
6	• 0102	• 419	50.56	76.92	• 507	• 449	-12.156	12.926	9.860	20.493
7	• 0114	• 421	51.80	76.64	• 525	• 467	-11.674	13.093	10.177	22.841
8	• 0123	• 422	52.51	76.01	• 532	• 482	-11.457	13.561	10.675	24.640
9	• 0144	• 426	56.79	76.76	• 551	• 505	-11.028	13.855	11.045	28.836
10	• 0155	• 427	56.61	75.79	• 564	• 527	-10.725	14.154	11.325	31.333
11	• 0201	• 427	66.81	76.59	• 576	• 536	-10.426	14.306	11.487	37.229
12	• 0214	• 427	57.43	75.48	• 582	• 584	-10.271	14.464	11.689	40.227
13	• 0236	• 431	58.06	75.34	• 588	• 588	-10.116	14.625	12.011	42.825
14	• 0253	• 433	59.62	76.11	• 594	• 569	-9.975	14.654	12.161	50.210
15	• 0276	• 456	59.01	76.21	• 599	• 576	-9.856	14.734	12.286	55.215
16	• 0291	• 453	60.43	74.86	• 613	• 582	-9.653	14.927	12.364	58.212
17	• 0308	• 465	62.06	74.49	• 629	• 610	-9.118	15.462	12.887	71.601
18	• 0457	• 378	67.73	74.32	• 646	• 621	-6.702	15.876	13.119	85.790
19	• 0493	• 390	64.04	74.08	• 656	• 637	-6.400	16.160	13.462	98.570
20	• 0567	• 171	66.25	73.95	• 669	• 673	-8.125	16.455	13.783	111.369
21	• 0627	• 114	67.21	73.74	• 681	• 680	-7.835	16.784	14.931	125.357
22	• 0663	• 126	68.13	73.58	• 691	• 672	-7.605	16.974	14.105	176.547
23	• 0754	• 137	69.14	73.44	• 701	• 680	-7.342	17.238	14.362	150.737
24	• 0824	• 160	70.51	73.30	• 710	• 689	-7.138	17.462	14.557	164.725
25	• 0893	• 162	70.91	73.18	• 719	• 697	-6.917	17.663	14.724	178.514
26	• 0955	• 173	71.68	73.05	• 727	• 700	-6.722	17.857	14.781	190.904
27	• 1024	• 196	72.45	72.94	• 734	• 712	-6.529	18.051	15.041	204.693
28	• 1043	• 198	73.71	72.94	• 743	• 720	-6.315	18.265	15.197	218.481
29	• 1122	• 190	73.65	72.77	• 750	• 724	-6.155	18.425	15.299	230.971
30	• 1222	• 74	70	72.66	• 756	• 722	-5.954	18.625	15.456	244.462
31	• 1294	• 225	75.39	72.55	• 764	• 739	-5.797	18.783	15.612	258.648
32	• 1464	• 266	77.16	72.33	• 782	• 754	-5.538	19.222	15.926	292.621
33	• 1641	• 298	78.63	72.12	• 797	• 768	-4.990	19.590	16.215	327.992
34	• 1816	• 330	80.32	71.93	• 814	• 784	-4.566	20.013	16.555	362.964
35	• 1903	• 362	81.84	71.65	• 830	• 799	-4.190	20.389	16.876	398.334
36	• 2167	• 303	83.23	71.46	• 844	• 812	-3.843	20.737	17.151	433.106
37	• 2345	• 426	84.47	71.23	• 856	• 827	-3.536	21.044	17.469	468.677
38	• 2514	• 456	85.73	71.04	• 869	• 840	-3.222	21.356	17.753	502.449
39	• 2646	• 488	86.93	70.90	• 881	• 849	-2.922	21.668	17.938	538.619
40	• 2865	• 520	88.26	70.73	• 895	• 861	-2.667	21.903	18.179	572.592
41	• 3033	• 552	89.31	70.51	• 905	• 875	-2.337	22.260	18.482	608.163
42	• 3343	• 616	91.47	70.21	• 927	• 895	-1.792	22.768	18.952	676.105
43	• 3744	• 679	93.43	69.89	• 947	• 916	-1.303	23.277	19.747	817.091
44	• 4093	• 743	95.02	69.61	• 963	• 935	-0.966	23.674	19.128	887.934
45	• 4443	• 876	96.11	69.34	• 976	• 953	-0.537	24.043	20.499	958.076
46	• 4794	• 870	97.45	69.08	• 988	• 971	-0.311	24.279	21.754	1028.019
47	• 5144	• 973	98.11	68.90	• 994	• 983	-0.138	24.442	22.909	1097.062
48	• 5494	• 997	98.54	68.79	• 999	• 990	-0.030	24.555	21.022	1168.105
49	• 5845	• 1161	98.63	68.71	1.000	• 995	-0.027	24.573	21.044	1237.648
50	• 6193	• 1124	98.63	68.66	1.000	• 998	-0.028	24.572	21.135	1307.591
51	• 6543	• 1187	98.65	68.63	1.000	1.001	-0.022	24.577	21.135	1307.591
52	• 6897	• 254	98.70	68.64	1.000	1.000	0.010	24.500	21.120	1378.333
53	• 7243	• 314	98.74	68.65	1.001	1.000	0.019	24.509	21.100	1447.476
54	• 7597	• 442	98.72	68.66	1.001	1.000	0.016	24.505	21.087	1517.619
55	• 7946	• 525	98.69	68.58	1.000	1.000	0.007	24.507	21.062	1587.761
56	• 8295	• 575	98.75	68.66	1.001	1.000	0.018	24.598	21.085	1657.704
57	• 8643	• 568	98.65	68.65	1.000	1.000	0.002	24.578	21.104	1727.247
58	• 8995	• 632	98.62	68.68	1.000	1.000	0.008	24.570	21.066	1797.590
59	• 9344	• 696	98.54	68.68	1.000	1.000	0.007	24.560	21.065	1867.333
60	• 9693	• 759	98.62	68.67	1.000	1.000	0.011	24.569	21.078	1937.776
61	• 10045	• 623	98.62	68.67	1.000	1.000	0.009	24.570	21.068	2007.418
62	• 10284	• 340	98.55	68.72	1.000	1.000	0.027	24.553	21.007	2576.753
63	• 115754	• 659	98.58	68.59	1.000	1.000	0.021	24.559	21.039	3148.285
64	• 118614	• 378	98.61	68.66	1.000	1.000	0.039	24.541	21.026	3719.810
65	• 124471	• 896	98.51	68.67	1.000	1.000	0.037	24.543	21.070	4290.751
66	• 124324	• 414	98.56	68.66	1.000	1.000	0.025	24.545	21.085	4860.886
67	• 127165	• 933	98.60	68.68	1.000	1.000	0.014	24.546	21.061	5432.617
68	• 130045	• 445	98.48	68.68	1.000	1.000	0.045	24.535	21.054	6004.150

Table 7.

JOE KLDC2 TAPE 3166R- FILES C1-21, PUNS 5.C1-5.21 03/09/79

RUN NO. 5. POINT 11. NO GRID

BOUNDARY LAYER PROPERTIES

LINEAR INTERPOLATION TO WALL	SUBLAYERED FUNCTION FROM WALL TO $y^+=35$	STANDARD
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FREE STREAM VELOCITY =	99.059	99.059
FREE STREAM TEMPERATURE =	68.872	
WALL TEMPERATURE =	84.430	
WALL HEAT FLUX =	.05134	
FREE STREAM DENSITY =	.0001608	
FREE STREAM KINEMATIC VISCOSITY =	.07374	
DENSITY OF FLUID AT WALL =	.0001693	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.97141	
WALL/FREE STREAM DENSITY RATIO =	2270367.69	
LOCATION REYNOLDS NUMBER (REX) =	.70000	
INPUT VALUE OF VELOCITY DELTA =	.67000	
INPUT VALUE OF TEMPERATURE DELTA =	.61240	
CALCULATED DELTA =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.09256	.09281
MOMENTUM THICKNESS ($\delta_{T\alpha}$) =	.06485	.06492
ENERGY-DISSIPATION THICKNESS =	.11456	.11456
ENTHALPY THICKNESS =	.00216	.00216
SHAPE FACTOR 12 (DELSTAR/ $\delta_{T\alpha}$) =	1.42734	1.42946
SHAPE FACTOR 32 (ENEPGY/ $\delta_{T\alpha}$) =	1.76696	1.76443
MOMENTUM THICKNESS REYNOLDS NUMBER =	3329.59	3333.40
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	4752.47	4764.96
SKIN FRICTION COEFFICIENT =	.033149	
FRICTION VELOCITY =	3.98780	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =	.52128	
CLAUSERS "DELTA" INTEGRAL =	-2.13805	-2.25171
CLAUSERS "F" INTEGRAL =	15.46966	15.57364
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.08824	.09065
MOMENTUM THICKNESS - CONSTANT DENSITY =	.06533	.06541
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.35060	1.38587

LOCATION -X- 44.22000

Z = +6 INCHES

Table 8.

JOE KLU02 TAPE 3166R- FILES C1-21, RUNS 5.01-5.21 03/09/79

RUN NO. F. POINT 11. NO GRID

REDUCED PROFILE DATA

N	Y INCHES	Y/ DEG.	U FT/SEC	T DEG. F	U/U _E	THETA DEG.	U _E UTAU	U(+)	T(+)	Y(+)
1	0.0000	0.0000	34.59	80.50	349	-253	-16.166	8.675	5.403	8.502
2	0.0062	0.0062	34.59	78.50	365	-217	-15.781	9.059	6.774	8.528
3	0.0124	0.0124	34.59	76.54	397	-347	-14.971	9.087	7.414	8.428
4	0.0186	0.0186	34.59	75.16	455	403	-13.556	11.021	8.618	15.766
5	0.0248	0.0248	47.74	77.56	482	435	-12.868	11.973	9.300	16.122
6	0.0310	0.0310	47.74	77.40	501	452	-12.604	12.437	9.669	20.382
7	0.0372	0.0372	47.74	77.24	521	477	-11.345	12.972	10.204	24.528
8	0.0434	0.0434	51.82	76.51	543	509	-11.030	13.496	10.882	28.528
9	0.0496	0.0496	55.58	76.24	564	521	-10.820	13.811	11.140	32.652
10	0.0558	0.0558	55.58	75.94	584	527	-10.622	14.021	11.274	35.208
11	0.0620	0.0620	55.58	75.64	604	546	-10.423	14.318	11.766	37.487
12	0.0682	0.0682	55.58	75.34	624	564	-10.223	14.557	12.066	41.199
13	0.0744	0.0744	55.58	75.04	644	581	-10.037	14.704	12.299	45.126
14	0.0806	0.0806	55.58	74.74	664	599	-9.878	14.863	12.431	49.071
15	0.0868	0.0868	55.58	74.43	684	618	-9.714	15.269	12.610	53.049
16	0.0930	0.0930	55.58	74.13	704	637	-9.557	15.700	13.210	57.774
17	0.0992	0.0992	55.58	73.83	724	654	-9.404	16.084	13.556	61.321
18	0.1054	0.1054	55.58	73.53	744	674	-8.563	16.287	13.765	65.102
19	0.1116	0.1116	55.58	73.23	763	691	-8.521	16.600	14.019	68.649
20	0.1178	0.1178	55.58	72.93	783	711	-7.942	16.899	14.345	72.590
21	0.1240	0.1240	55.58	72.63	803	737	-7.498	17.088	14.475	76.978
22	0.1292	0.1292	55.58	72.33	823	753	-7.048	17.342	14.649	81.721
23	0.1354	0.1354	55.58	72.03	843	776	-7.051	17.551	14.867	85.662
24	0.1416	0.1416	55.58	71.73	863	792	-7.102	17.758	15.023	89.031
25	0.1478	0.1478	55.58	71.43	883	791	-6.932	17.911	15.154	93.990
26	0.1540	0.1540	55.58	71.13	903	795	-6.723	18.118	15.301	97.126
27	0.1602	0.1602	55.58	70.83	923	799	-6.558	18.282	15.470	222.711
28	0.1664	0.1664	55.58	70.53	943	731	-6.374	18.467	15.630	236.455
29	0.1726	0.1726	55.58	70.23	963	749	-6.245	18.595	15.772	250.395
30	0.1788	0.1788	55.58	69.93	983	753	-6.122	18.796	16.100	283.577
31	0.1850	0.1850	55.58	69.63	1003	769	-5.996	19.485	16.451	318.133
32	0.1912	0.1912	55.58	69.33	1023	783	-5.866	19.778	16.681	351.707
33	0.1973	0.1973	55.58	69.03	1043	794	-5.738	20.010	16.980	387.441
34	0.2035	0.2035	55.58	68.73	1063	806	-5.608	20.460	17.247	420.427
35	0.2097	0.2097	55.58	68.43	1083	818	-5.479	20.822	17.486	456.357
36	0.2159	0.2159	55.58	68.13	1103	838	-5.350	21.103	17.693	489.032
37	0.2221	0.2221	55.58	67.83	1123	843	-5.222	21.306	18.029	524.081
38	0.2283	0.2283	55.58	67.53	1143	853	-5.095	21.509	18.463	558.662
39	0.2345	0.2345	55.58	67.23	1163	863	-5.066	21.709	18.940	594.190
40	0.2407	0.2407	55.58	66.93	1183	873	-4.936	22.000	19.350	632.320
41	0.2469	0.2469	55.58	66.63	1203	883	-4.806	22.400	19.750	670.043
42	0.2531	0.2531	55.58	66.33	1223	893	-4.676	22.800	20.150	710.152
43	0.2593	0.2593	55.58	66.03	1243	903	-4.546	23.200	20.533	748.676
44	0.2655	0.2655	55.58	65.73	1263	913	-4.416	23.600	20.915	787.395
45	0.2717	0.2717	55.58	65.43	1283	923	-4.286	24.000	21.305	826.037
46	0.2779	0.2779	55.58	65.13	1303	933	-4.156	24.400	21.693	864.395
47	0.2841	0.2841	55.58	64.83	1323	943	-4.026	24.800	22.081	902.074
48	0.2903	0.2903	55.58	64.53	1343	953	-3.896	25.200	22.469	939.751
49	0.2965	0.2965	55.58	64.23	1363	963	-3.766	25.600	22.857	977.667
50	0.3027	0.3027	55.58	63.93	1383	973	-3.636	26.000	23.245	1015.190
51	0.3089	0.3089	55.58	63.63	1403	983	-3.506	26.400	23.633	1053.037
52	0.3151	0.3151	55.58	63.33	1423	993	-3.376	26.800	24.020	1091.835
53	0.3213	0.3213	55.58	63.03	1443	1.000	-3.246	27.200	24.408	1129.751
54	0.3275	0.3275	55.58	62.73	1463	994	-3.116	27.600	24.796	1167.667
55	0.3337	0.3337	55.58	62.43	1483	995	-3.086	28.000	25.184	1205.190
56	0.3399	0.3399	55.58	62.13	1503	996	-3.056	28.400	25.572	1243.751
57	0.3461	0.3461	55.58	61.83	1523	997	-3.026	28.800	25.960	1281.190
58	0.3523	0.3523	55.58	61.53	1543	998	-2.996	29.200	26.348	1319.714
59	0.3585	0.3585	55.58	61.23	1563	999	-2.966	29.600	26.736	1358.237
60	0.3647	0.3647	55.58	60.93	1583	1.000	-2.936	30.000	29.988	1396.563
61	0.3709	0.3709	55.58	60.63	1603	999	-2.906	30.400	24.375	1435.669
62	0.3771	0.3771	55.58	60.33	1623	1.000	-2.876	30.800	24.763	1474.788
63	0.3833	0.3833	55.58	60.03	1643	999	-2.846	31.200	25.151	1513.807
64	0.3895	0.3895	55.58	59.73	1663	1.000	-2.816	31.600	25.539	1552.826
65	0.3957	0.3957	55.58	59.43	1683	999	-2.786	32.000	25.927	1591.568
66	0.4019	0.4019	55.58	59.13	1703	1.000	-2.756	32.400	26.315	1630.687
67	0.4081	0.4081	55.58	58.83	1723	997	-2.726	32.800	26.703	1669.028

Table 8.

JOE KLD02 TAPE 3166R- FILES C1-21, RUNS 5.01-5.21 03/29/79

RUN NO. 5. POINT 13. NO GRID

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD FUNCTION FROM WALL TO $y+=35$
FREE STREAM VELOCITY	99.444	99.444
FREE STREAM TEMPERATURE	68.745	
WALL TEMPERATURE	84.123	
WALL HEAT FLUX	.05151	
FREE STREAM DENSITY	.07593	
FREE STREAM KINEMATIC VISCOSITY	.0001607	
DENSITY OF FLUID AT WALL	.07378	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001691	
WALL/FREE STREAM DENSITY RATIO	.97173	
LOCATION REYNOLDS NUMBER (REX)	2692679.78	
INPUT VALUE OF VELOCITY DELTA	.77000	
INPUT VALUE OF TEMPERATURE DELTA	.84000	
CALCULATED DELTA		.70870
DELTA 69.5% INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.10768	.10762
MOMENTUM THICKNESS (THETA)	.07533	.07549
ENERGY-DISSIPATION THICKNESS	.13310	.13317
ENTHALPY THICKNESS	.00265	.00265
SHAPE FACTOR 12 (DELSTAR/THETA)	1.42940	1.42913
SHAPE FACTOR 32 (ENERGY/THETA)	1.76673	1.76404
MOMENTUM THICKNESS REYNOLDS NUMBER	3864.57	3892.79
DISPLACEMENT THICKNESS REYNOLDS NUMBER	5552.60	5559.41
SKIN FRICTION COEFFICIENT	.003022	
FRICITION VELOCITY	.92160	
LAW OF THE WALL CONSTANT (K)	.41000	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.56222
CLAUSERS "DELTA" INTEGRAL	-2.52848	-2.66697
CLAUSERS "C" INTEGRAL	18.72867	18.70714
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.10238	.10517
MOMENTUM THICKNESS - CONSTANT DENSITY	.07592	.07608
SHAPE FACTOR 12 - CONSTANT DENSITY	1.34855	1.38236

LOCATION -X- 52.22000

Z = CENTERLINE

Table 9.

JOB KLDC2 TAPE 3166R- FILES 01-21, PUNS 5.01-5.21 03/09/79

PUN NO. 5. POINT 13. NO GRID

REDUCED PROFILE DATA

N	INCHES	V	U	T	U-UF	THETA	UTAU	U(+)	T(+)	V(+)
1	0052	•	35	5.52	79.45	.357	•304 -16.361	9.057	6.294	10.362
2	0062	•	37	0.01	76.94	.381	•337 -15.694	9.655	6.988	12.234
3	0072	•	42	32	78.44	.426	•349 -14.566	10.742	7.656	14.554
4	0085	•	45	14	78.12	.454	•392 -13.849	11.510	8.122	16.487
5	0102	•	48	48	77.63	.488	•422 -12.996	12.363	8.750	19.777
6	0115	•	50	19	77.34	.505	•441 -12.561	12.798	9.139	22.765
7	0124	•	51	10	77.17	.514	•452 -12.326	13.529	9.475	24.219
8	0136	•	52	72	77.02	.530	•462 -11.913	13.445	9.570	27.097
9	0147	•	54	01	76.65	.543	•486 -11.566	13.773	10.070	31.562
10	0156	•	55	05	76.42	.554	•501 -11.321	14.020	10.375	35.828
11	0164	•	56	04	76.15	.562	•513 -11.118	14.240	10.638	36.100
12	0171	•	56	41	76.04	.569	•519 -10.922	14.476	10.749	42.796
13	0176	•	56	04	75.73	.573	•525 -10.638	14.521	11.030	45.092
14	0179	•	57	55	75.74	.579	•526 -10.604	14.675	11.249	48.057
15	0182	•	58	29	75.57	.586	•552 -10.345	14.664	11.447	52.823
16	0186	•	58	85	75.57	.592	•556 -10.23	15.013	11.523	56.495
17	0189	•	59	14	75.58	.605	•560 -10.123	15.335	11.785	68.865
18	0194	•	61	73	75.79	.621	•587 -9.618	15.747	12.175	82.201
19	0196	•	62	30	74.83	.637	•604 -9.201	16.157	12.528	95.344
20	0198	•	64	32	74.65	.646	•610 -8.962	16.376	12.761	106.940
21	0199	•	65	49	74.61	.659	•625 -8.656	16.717	12.925	121.036
22	0200	•	66	24	74.53	.667	•647 -8.441	16.917	13.205	134.386
23	0201	•	67	21	74.17	.676	•647 -8.223	17.135	13.405	146.175
24	0202	•	68	11	74.27	.685	•654 -7.991	17.361	13.552	159.125
25	0206	•	68	93	74.21	.692	•657 -7.807	17.551	13.626	172.654
26	0209	•	69	45	73.96	.698	•667 -7.648	17.710	13.830	184.561
27	0210	•	70	74	73.74	.716	•675 -7.446	17.910	14.000	198.447
28	0211	•	71	17	73.62	.716	•683 -7.210	18.146	14.149	212.276
29	0212	•	71	52	73.56	.719	•697 -7.121	18.277	14.239	223.293
30	0213	•	72	13	73.43	.725	•692 -6.966	18.303	14.346	236.436
31	0214	•	72	00	73.37	.732	•699 -6.794	18.564	14.489	249.965
32	0215	•	72	43	73.09	.748	•717 -6.378	18.980	14.670	263.209
33	0216	•	75	88	72.86	.763	•772 -6.100	19.349	15.179	317.419
34	0217	•	77	13	72.66	.776	•746 -5.690	19.660	15.461	350.663
35	0218	•	78	56	72.42	.790	•761 -5.325	20.030	15.767	366.419
36	0219	•	79	54	72.23	.801	•773 -5.050	20.309	16.023	38.889
37	0220	•	80	52	72.06	.813	•784 -4.749	20.609	16.256	854.066
38	0221	•	80	24	71.85	.825	•798 -4.446	20.913	16.542	886.923
39	0222	•	83	14	71.69	.836	•809 -4.159	21.200	16.764	520.040
40	0223	•	84	10	71.53	.846	•819 -3.900	21.456	16.973	553.410
41	0224	•	85	29	71.30	.858	•829 -3.600	21.749	17.179	588.587
42	0225	•	87	40	71.08	.873	•848 -3.391	22.267	17.579	656.620
43	0226	•	89	13	70.80	.866	•866 -3.191	22.727	17.960	724.961
44	0227	•	90	99	70.57	.914	•882 -2.983	23.176	18.273	791.141
45	0228	•	92	60	70.27	.971	•901 -2.746	23.612	18.660	859.368
46	0229	•	94	21	70.17	.945	•917 -2.533	23.973	18.997	926.435
47	0230	•	95	81	69.76	.959	•934 -2.333	24.326	19.364	995.242
48	0231	•	96	57	69.53	.971	•949 -2.134	24.624	19.665	1062.116
49	0232	•	97	55	69.31	.981	•964 -1.934	24.874	19.972	1133.140
50	0233	•	98	41	69.11	.989	•976 -1.790	25.068	20.234	1197.796
51	0234	•	98	74	69.00	.993	•983 -1.611	25.278	20.384	1265.443
52	0235	•	99	14	68.91	.997	•989 -1.477	25.506	1332.510	
53	0245	1.0022	99	39	68.80	1.000	•997 -0.014	25.384	20.657	1400.350
54	0246	1.0022	99	44	68.81	1.000	•996 -0.006	25.356	20.644	1667.997
55	0247	1.0022	99	44	68.79	1.000	•997 -0.006	25.358	20.669	1535.644
56	0248	1.0021	99	43	68.74	1.000	1.001 -0.001	25.355	20.738	16C3.485
57	0249	1.0021	99	43	68.71	1.000	1.002 -0.001	25.361	20.769	1670.742
58	0250	1.0020	99	42	68.67	1.000	1.003 -0.001	25.367	20.794	1738.190
59	0251	1.0020	99	41	68.77	1.000	1.004 -0.001	25.348	20.604	1805.846
60	0252	1.0019	99	41	68.75	1.000	1.005 -0.001	25.366	20.715	1873.493
61	0253	1.0019	99	40	68.81	1.000	1.006 -0.001	25.371	20.642	1941.013
62	0254	1.0019	99	39	68.81	1.000	1.007 -0.001	25.353	20.622	2491.979
63	0255	1.0019	99	39	68.82	1.000	1.008 -0.001	25.346	20.635	3045.138
64	0256	1.0018	99	37	68.90	1.000	1.009 -0.001	25.338	20.522	3598.491
65	0257	1.0018	99	34	68.90	1.000	1.010 -0.001	25.322	20.515	4150.104
66	0258	1.0018	99	34	68.92	1.000	1.011 -0.001	25.335	20.486	47C1.523
67	0259	1.0017	99	34	68.92	1.000	1.012 -0.001	25.347	20.493	5254.682
68	0260	1.0017	99	34	68.91	1.000	1.013 -0.001	25.331	20.500	5806.875

Table 9.

JOE KLD02 TAPE 3166R- FILES 01-21, PUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 14. NO GRID

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION	SUBLAYERED FUNCTION FROM TO WALL	STANDARD FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY	= 98.693		98.693
FREE STREAM TEMPERATURE	= 67.661		
WALL TEMPERATURE	= 83.710		
WALL HEAT FLUX	= .04986		
FREE STREAM DENSITY	= .07571		
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001659		
KINEMATIC VISCOSITY OF FLUID AT WALL	= .07347		
WALL/FREE STREAM DENSITY RATIO	= .0001697		
LOCATION REYNOLDS NUMBER (REX)	= 3270180.37		
INPUT VALUE OF VELOCITY DELTA	= .88000		
INPUT VALUE OF TEMPERATURE DELTA	= .92000		
CALCULATED DELTA			.81138
DISPLACEMENT THICKNESS (DELSTAR)	= .00000		
MOMENTUM THICKNESS (THETA)	= .12218		.12228
ENERGY-DISSIPATION THICKNESS	= .08569		.08609
ENTHALPY THICKNESS	= .15198		.15199
SHAPE FACTOR 12 (DELSTAR/THETA)	= .00297		.00298
SHAPE FACTOR 32 (ENERGY/THETA)	= 1.42244		1.42057
MOMENTUM THICKNESS REYNOLDS NUMBER	= 1.76823		1.76573
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 4389.67		4399.09
SKIN FRICTION COEFFICIENT	= 6244.03		6249.21
FRICITION VELOCITY	= .002948		
LAW OF THE WALL CONSTANT (K)	= 3.24608		
LAW OF THE WALL CONSTANT (C)	= .41000		
WAKE STRENGTH	= 5.00000		.56814
CLAUSERS "DELTA" INTEGRAL	= -2.91444		-3.06146
CLAUSERS "G" INTEGRAL	= 21.52986		21.44969
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .11639		.11931
MOMENTUM THICKNESS - CONSTANT DENSITY	= .08654		.08673
SHAPE FACTOR 12 - CONSTANT DENSITY	= 1.34494		1.37559

LOCATION -X- 60.25000

Z = CENTERLINE

Table 10.

JOE KLD02 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 03/09/70

RUN NO. 5. POINT 14.

NO GRID

REDUCED PROFILE DATA

N	INCHES	Y/	U	T	U-UF	THFTA	UTAU	U1+3	T4+3	V(+)
1	•0256	•34.16	79.01	•346	•293	-16.779	8.891	6.701	10.633	
2	•0266	•37.61	78.73	•381	•335	-15.661	9.779	7.313	12.522	
3	•0276	•41.58	77.77	•421	•370	-14.649	10.612	8.080	14.411	
4	•0287	•44.21	77.42	•448	•392	-14.166	11.495	8.562	16.488	
5	•0291	•47.17	77.03	•478	•416	-13.397	12.264	9.087	19.132	
6	•0295	•49.57	76.42	•502	•451	-12.773	12.888	9.680	22.632	
7	•0299	•50.25	76.27	•510	•461	-12.560	13.092	10.123	22.443	
8	•0312	•51.45	76.95	•524	•483	-12.222	13.439	10.549	27.065	
9	•0316	•53.13	76.68	•538	•501	-11.846	13.815	10.928	31.597	
10	•0319	•54.26	76.80	•550	•518	-11.554	14.107	11.305	35.753	
11	•0323	•54.67	76.23	•554	•529	-11.445	14.215	11.545	38.208	
12	•0326	•56.23	75.91	•560	•537	-11.062	14.381	11.721	40.285	
13	•0329	•56.15	75.01	•569	•542	-10.891	14.769	12.091	45.196	
14	•0324	•56.80	74.92	•576	•554	-10.794	14.867	12.304	48.596	
15	•0375	•57.16	74.66	•579	•564	-10.630	15.031	12.439	51.095	
16	•0336	•57.81	74.57	•586	•570	-10.236	15.425	12.755	55.017	
17	•0444	•59.32	74.73	•601	•584	-10.036	15.811	13.125	57.104	
18	•0453	•60.65	74.06	•614	•601	-9.962	16.119	13.514	60.703	
19	•0619	•63.04	73.61	•626	•619	-9.542	16.192	13.742	63.735	
20	•0623	•63.85	73.53	•639	•630	-9.042	16.619	13.648	65.633	
21	•0624	•67.16	73.30	•648	•634	-8.773	16.887	14.154	67.721	
22	•0777	•67.85	73.33	•658	•648	-8.592	17.069	14.379	68.508	
23	•0786	•68.55	73.14	•665	•659	-8.348	17.313	14.494	69.872	
24	•0803	•69.32	72.05	•675	•664	-8.185	17.476	14.737	71.715	
25	•0825	•70.21	72.88	•681	•675	-7.985	17.675	14.905	72.369	
26	•0893	•70.68	72.75	•689	•683	-7.777	17.884	15.082	74.590	
27	•1037	•68.78	72.62	•691	•691	-7.659	18.002	15.265	76.488	
28	•1093	•69.24	72.53	•702	•697	-7.558	18.152	15.460	78.576	
29	•1157	•70.34	72.47	•713	•706	-7.372	18.289	15.542	80.419	
30	•1222	•71.02	72.38	•720	•712	-7.195	18.466	15.617	82.444	
31	•1295	•72.37	72.28	•725	•725	-6.944	18.817	15.817	84.369	
32	•1463	•72.88	72.08	•733	•737	-6.478	19.182	16.091	86.988	
33	•1641	•73.78	71.98	•748	•750	-6.226	19.435	16.362	88.662	
34	•1814	•74.75	71.68	•757	•759	-5.884	19.777	16.563	90.847	
35	•1995	•76.16	71.53	•771	•770	-5.576	20.084	16.804	90.576	
36	•2103	•76.77	71.36	•783	•781	-5.294	20.367	17.045	92.572	
37	•2134	•77.26	71.16	•794	•790	-5.054	20.607	17.276	94.254	
38	•2251	•78.33	71.05	•803	•799	-4.747	20.914	17.441	95.539	
39	•2695	•79.26	70.89	•815	•815	-4.468	21.193	17.678	97.968	
40	•2867	•80.44	70.71	•826	•826	-4.188	21.423	17.855	99.469	
41	•3204	•81.51	70.58	•835	•818	-4.028	21.683	18.214	101.742	
42	•3396	•82.39	70.43	•853	•834	-3.768	22.030	18.596	103.745	
43	•3747	•83.20	70.32	•872	•852	-3.283	22.378	18.923	105.845	
44	•4097	•83.87	70.24	•888	•867	-2.881	22.780	19.242	107.193	
45	•4443	•84.61	69.93	•904	•881	-2.465	23.091	19.571	108.207	
46	•4793	•85.56	69.56	•919	•897	-2.060	23.594	19.888	110.400	
47	•5142	•86.69	69.32	•934	•911	-1.698	24.302	20.427	112.985	
48	•5423	•87.16	69.09	•947	•924	-1.359	24.599	20.697	114.466	
49	•5845	•87.47	68.88	•956	•936	-1.071	24.859	20.965	116.192	
50	•6157	•87.64	68.49	•968	•946	-8.808	25.067	21.173	118.018	
51	•6545	•87.07	68.32	•978	•960	-5.564	25.283	21.301		
52	•6893	•86.50	68.14	•985	•970	-3.378	21.673	21.673		
53	•7249	•89.3	97.77	•991	•977	-2.241	25.420	21.334	136.9155	
54	•7593	•93.6	98.18	•995	•984	-1.133	25.528	21.473	1474.125	
55	•7943	•97.9	98.41	•997	•989	-0.833	25.616	21.581	1500.226	
56	•8294	•1.065	98.53	•998	•994	-0.433	25.672	21.712	1566.521	
57	•8643	•1.022	98.74	•1.000	•995	-0.002	25.658	21.791	1632.435	
58	•8995	•1.105	98.60	•970	•998	-0.002	25.658	21.867	1696.917	
59	•9343	•1.152	98.65	•1.000	•995	-0.002	25.658	21.867	1764.642	
60	•1.0546	•1.195	98.73	•970	•1.000	-0.002	25.658	21.867	1831.124	
61	•1.0593	•1.238	98.68	•970	•1.000	-0.002	25.658	21.780	1897.1616	
62	•1.0646	•1.242	98.65	•970	•1.000	-0.002	25.658	21.773	1935.121	
63	•1.0692	•1.294	98.69	•970	•1.000	-0.002	25.658	21.765	1955.223	
64	•1.0861	•2.294	98.56	•970	•1.000	-0.002	25.658	21.757	1993.972	
65	•2.1471	•2.546	98.62	•970	•1.000	-0.002	25.658	21.745	2035.630	
66	•2.4323	•2.908	98.63	•970	•1.000	-0.002	25.658	21.735	2055.223	
67	•2.7169	•3.351	98.63	•970	•1.000	-0.002	25.658	21.725	2093.972	
68	•3.0047	•3.703	98.47	•970	•1.000	-0.002	25.658	21.715	2135.165	

Table 10.

JOB KLD02 TAPE 3166R- FILES D1-21, RUNS 5.01-E.21 03/09/79

RUN NO. 5. POINT 16. NO GRID

SECONDARY LAYER PROPERTIES

LINEAR INTERPOLATION	STANDARD SUBLAYER FUNCTION FROM TO WALL	STANDARD FUNCTION FROM WALL TO Y+=35
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FREE STREAM VELOCITY =	98.710	
FREE STREAM TEMPERATURE =	68.031	
WALL TEMPERATURE =	85.120	
WALL HEAT FLUX =	.0E122	
FREE STREAM DENSITY =	.0001511	
DENSITY OF FLUID AT WALL =	.07328	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001705	
WALL/FREE STREAM DENSITY RATIO =	.96863	
LOCATION REYNOLDS NUMBER (REX) =	307588E-25	
INPUT VALUE OF VELOCITY DELTA =	.85000	
INPUT VALUE OF TEMPERATURE DELTA =	.85000	
CALCULATED DELTA =		.706E4
DISPLACEMENT THICKNESS (DELSTAR) =	.00000	
MOMENTUM THICKNESS (THETA) =	.10755	.10780
ENERGY-DISSIPATION THICKNESS =	.07486	.07497
ENTHALPY THICKNESS =	.13224	.13222
SHAPE FACTOR 12 (DELSTAR/THETA) =	.00311	.00311
SHAPE FACTOR 32 (ENEPGY/THETA) =	1.43636	1.43799
MOMENTUM THICKNESS REYNOLDS NUMBER =	1.76599	1.76370
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	3822.71	3827.19
SKIN FRICTION COEFFICIENT =	5495.80	5503.44
FRICITION VELOCITY =	.003019	
LAW OF THE WALL CONSTANT (K) =	3.89672	
LAW OF THE WALL CONSTANT (C) =	.41000	
WAVE STRENGTH =	5.00000	.56596
CLAUSERS "DELTA" INTEGPAL =	-2.52848	-2.65211
CLAUSERS "C" INTEGPAL =	18.54361	18.64576
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.10213	.10470
MOMENTUM THICKNESS - CONSTANT DENSITY =	.07555	.07564
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.35187	1.38416

LOCATION -X- 60.25000

Z = -6 INCHES

Table 11.

JOE KLDC2 TAPE 3166R- FILES C1-21, RUNS 5.01-5.21 03/09/79
RUN NO. E. POINT 16. NO GRID

REDUCED PROFILE DATA

	Y	U	T	U-UF	THETA	U-UE	U(+)	T(+)	Y(+)
1	INCHES	DELT A	FT/SEC	DEG. F	U/UF	U-TAU	8.697	5.159	8.819
2	.0246	.33.54	81.26	.340	.226	-16.725	9.363	6.676	11.295
3	.0256	.36.49	80.13	.370	.252	-15.965	10.218	7.500	11.200
4	.0266	.40.72	79.51	.406	.286	-14.243	11.117	8.117	14.915
5	.0276	.45.43	78.50	.439	.356	-13.673	11.654	8.774	17.210
6	.0286	.48.16	78.13	.460	.410	-12.973	12.359	9.365	19.867
7	.0296	.51.42	77.65	.510	.457	-12.393	13.136	9.993	22.915
8	.0306	.51.16	77.41	.519	.481	-11.785	13.547	10.316	24.248
9	.0316	.52.79	77.03	.535	.492	-11.517	13.818	11.210	26.248
10	.0326	.53.83	76.74	.545	.502	-11.253	14.078	11.648	36.520
11	.0336	.54.00	76.51	.556	.510	-11.058	14.273	11.845	39.105
12	.0346	.55.61	76.41	.560	.516	-10.925	14.454	12.369	42.344
13	.0356	.56.02	76.27	.564	.521	-10.648	14.641	12.569	45.582
14	.0366	.57.14	76.13	.568	.526	-10.476	14.855	12.658	49.010
15	.0376	.57.42	76.03	.569	.530	-10.344	14.987	12.658	53.391
16	.0386	.58.49	75.66	.566	.537	-9.510	15.390	13.421	56.249
17	.0396	.59.04	75.34	.566	.540	-9.182	15.612	13.820	67.968
18	.0406	.61.03	75.24	.563	.544	-8.958	15.874	14.251	81.063
19	.0416	.61.71	74.79	.564	.549	-8.692	16.079	14.415	95.106
20	.0426	.64.75	74.41	.567	.553	-8.446	16.288	14.558	106.535
21	.0436	.65.27	74.06	.568	.557	-8.182	16.492	14.797	119.297
22	.0446	.65.67	73.73	.568	.560	-7.925	16.692	15.021	132.821
23	.0456	.65.94	73.66	.567	.567	-7.692	16.890	15.251	144.631
24	.0466	.66.73	74.24	.570	.578	-7.467	17.124	15.460	158.536
25	.0476	.67.60	73.87	.565	.586	-7.232	17.363	15.656	171.870
26	.0486	.68.91	73.76	.568	.585	-7.093	17.578	15.194	183.298
27	.0496	.69.66	73.70	.566	.588	-6.945	17.684	15.284	195.889
28	.0506	.70.63	73.59	.575	.597	-6.812	17.877	15.429	209.585
29	.0516	.70.05	73.51	.579	.605	-6.674	18.074	15.531	220.251
30	.0526	.70.47	73.40	.582	.613	-6.538	18.271	15.655	223.585
31	.0536	.71.67	73.40	.583	.620	-6.402	18.478	15.813	224.729
32	.0546	.72.34	73.30	.583	.626	-6.272	18.659	15.924	226.020
33	.0556	.73.74	73.30	.587	.633	-6.147	18.825	16.030	231.320
34	.0566	.75.10	72.91	.591	.640	-6.047	18.925	16.174	236.340
35	.0576	.76.62	72.65	.595	.648	-5.959	19.036	16.316	240.633
36	.0586	.77.00	72.39	.590	.655	-5.826	20.006	17.030	244.226
37	.0596	.77.77	72.15	.591	.662	-5.733	20.298	17.255	247.126
38	.0606	.80.27	71.65	.603	.671	-5.638	20.500	17.421	248.256
39	.0616	.81.63	71.31	.613	.680	-5.538	20.700	17.593	251.540
40	.0626	.82.63	71.20	.617	.682	-5.438	21.229	15.613	252.299
41	.0636	.84.77	71.30	.623	.692	-5.348	21.414	15.762	256.622
42	.0646	.84.91	71.30	.621	.700	-5.255	21.606	16.474	260.205
43	.0656	.85.56	71.29	.625	.706	-5.164	21.795	16.816	264.346
44	.0666	.87.72	71.25	.632	.715	-5.074	22.006	17.030	268.633
45	.0676	.89.27	71.25	.637	.726	-4.984	22.298	17.255	272.126
46	.0686	.90.63	71.25	.643	.733	-4.893	22.500	17.421	276.536
47	.0696	.92.14	71.25	.646	.742	-4.802	22.706	17.593	280.642
48	.0706	.93.44	69.57	.649	.752	-4.712	23.005	17.757	284.626
49	.0716	.94.90	69.29	.657	.761	-4.626	23.205	17.920	288.547
50	.0726	.96.55	68.72	.661	.773	-4.541	23.405	21.182	292.264
51	.0736	.97.97	68.66	.665	.782	-4.454	23.605	21.553	304.7313
52	.0746	.97.88	68.55	.652	.789	-4.368	23.804	21.942	311.379
53	.0756	.97.88	68.36	.653	.793	-4.288	24.004	22.219	316.1220
54	.0766	.97.77	68.16	.656	.800	-4.205	24.204	22.460	320.436
55	.0776	.98.39	68.24	.657	.807	-4.126	24.404	22.680	324.271
56	.0786	.98.51	68.17	.659	.813	-4.046	24.604	22.841	328.540
57	.0796	.98.59	68.19	.663	.819	-3.966	24.804	23.081	332.500
58	.0806	.98.61	68.15	.665	.825	-3.886	25.004	23.321	336.556
59	.0816	.98.72	68.13	.668	.831	-3.806	25.204	23.567	340.591
60	.0826	.98.72	68.11	.671	.837	-3.726	25.404	23.806	344.633
61	.0836	.98.70	68.04	.674	.843	-3.646	25.604	24.041	348.670
62	.0846	.98.69	68.02	.675	.849	-3.566	25.804	24.279	352.607
63	.0856	.98.65	68.01	.678	.855	-3.486	26.004	24.517	356.544
64	.0866	.98.65	68.01	.681	.861	-3.406	26.204	24.755	360.482
65	.0876	.98.66	68.10	.699	.865	-3.326	26.404	24.990	364.413
66	.0886	.98.65	68.11	.699	.865	-3.246	26.604	25.227	368.342
67	.0896	.98.56	68.11	.699	.866	-3.166	26.804	25.456	372.267
68	.0906	.98.70	68.12	1.000	.866	-3.086	27.004	25.684	376.193
69	3.0046	4.256	98.82	68.16	1.001	.892	0.029	25.360	5723.203

Table 11.

JOB KLD02 TAPE 31CLR- FILFS 01-21, RUNS 5.01-5.21 03/09/79
 RUN NO. 5. POINT 17. NO GRID

BOUNDARY LAYER PROPERTIES

STANDARD
 LINEAR SUBLAYERED
 INTERPOLATION FUNCTION FROM
 TO WALL WALL TO $y+=35$

FREE STREAM VELOCITY	=	99.470	99.470
FREE STREAM TEMPERATURE	=	68.758	
WALL TEMPERATURE	=	85.450	
WALL HEAT FLUX	=	.05012	
FREE STREAM DENSITY	=	.07555	
FREE STREAM KINEMATIC VISCOSITY	=	.000161E	
DENSITY OF FLUID AT WALL	=	.07324	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.0001707	
WALL/FREE STREAM DENSITY RATIO	=	.96938	
LOCATION REYNOLDS NUMBER (REX)	=	3500001.19	
INPUT VALUE OF VELOCITY DELTA	=	.98000	
INPUT VALUE OF TEMPERATURE DELTA	=	.98000	
CALCULATED DELTA	=		.91669
DELTA 99.5% INPUT	=	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	=	.13832	.13846
MOMENTUM THICKNESS (THETA)	=	.09764	.09777
ENERGY-DISSIPATION THICKNESS	=	.17257	.17262
ENTHALPY THICKNESS	=	.00320	.00321
SHAPE FACTOR 12 (DELSTAR/THETA)	=	1.41664	1.41621
SHAPE FACTOR 32 (ENFPGY/THETA)	=	1.76741	1.76568
MOMENTUM THICKNESS REYNOLDS NUMBER	=	5010.87	5017.25
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	7098.62	7105.52
SKIN FRICTION COEFFICIENT	=	.002851	
FRICTION VELOCITY	=	3.81464	
LAW OF THE WALL CONSTANT (K)	=	.41000	
LAW OF THE WALL CONSTANT (C)	=	5.00000	
WAKE STRENGTH	=		.59918
CLAUSERS "DELTA" INTEGRAL	=	-3.39474	-3.52679
CLAUSERS "C" INTEGRAL	=	24.99203	24.99519
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.13265	.13525
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.09836	.09849
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.34862	1.37323
LOCATION -X-	=	68.20000	
Z = CENTERLINE	=		

Table 12.

JRC KLD22 TAPE 3166P- FILES D1-21, RUNS 5-D1-E-21 03/09/79

RUN NO. 5. POINT 17. NO GRID

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELT A	U FT/SEC	T DEG. F	U/UF	THETA	U-UF UTAU	U(+)	T(+)	Y(+)
1	• 2049	• 305	30.02	81.72	• 311	• 247	-17.970	8.105	5.524	• 187
2	• 2056	• 305	37.08	80.18	• 373	• 310	-16.356	9.719	7.056	12.163
3	• 2054	• 306	40.40	79.66	• 406	• 303	-15.460	10.500	7.878	14.266
4	• 2055	• 306	44.05	79.03	• 452	• 406	-14.280	11.795	9.376	17.565
5	• 2054	• 306	47.09	79.03	• 482	• 445	-13.496	12.580	9.929	21.290
6	• 2055	• 306	50.76	77.56	• 507	• 473	-12.866	13.272	10.554	25.575
7	• 2056	• 306	51.40	77.29	• 517	• 486	-12.603	13.473	10.918	27.810
8	• 2057	• 306	52.37	77.01	• 526	• 506	-12.346	13.728	11.297	30.604
9	• 2058	• 306	53.00	76.79	• 535	• 519	-12.116	13.962	11.589	33.957
10	• 2059	• 306	54.04	76.60	• 544	• 530	-11.896	14.180	11.840	37.662
11	• 2060	• 306	54.73	76.23	• 552	• 543	-11.675	14.471	12.129	41.708
12	• 2061	• 306	55.73	76.24	• 556	• 552	-11.572	14.504	12.327	44.574
13	• 2062	• 306	57.71	75.82	• 560	• 557	-11.051	15.025	12.877	56.709
14	• 2063	• 306	58.50	75.56	• 565	• 563	-10.641	15.475	13.236	69.534
15	• 2064	• 306	60.20	75.22	• 575	• 613	-10.278	15.706	13.692	82.386
16	• 2065	• 306	61.41	74.98	• 617	• 627	-9.676	16.100	14.056	93.935
17	• 2066	• 306	62.55	74.79	• 626	• 640	-9.678	16.398	14.258	1C7.160
18	• 2067	• 306	63.71	74.65	• 639	• 647	-9.375	16.701	14.454	11.640
19	• 2068	• 306	64.32	74.55	• 647	• 653	-9.214	16.862	14.575	131.502
20	• 2069	• 306	65.31	74.55	• 657	• 665	-8.954	17.122	14.843	144.227
21	• 2070	• 306	66.13	74.30	• 665	• 668	-8.741	17.335	14.914	157.266
22	• 2071	• 306	67.00	74.00	• 670	• 674	-8.606	17.470	15.053	168.256
23	• 2072	• 306	68.76	73.97	• 684	• 694	-8.366	17.690	15.203	181.481
24	• 2073	• 306	69.80	73.97	• 694	• 694	-8.233	17.843	15.494	194.519
25	• 2074	• 306	70.76	73.97	• 691	• 699	-8.061	18.015	15.611	205.982
26	• 2075	• 306	71.72	73.71	• 697	• 703	-7.964	18.172	15.702	218.362
27	• 2076	• 306	72.66	73.57	• 701	• 712	-7.805	18.271	15.896	231.601
28	• 2077	• 306	73.60	73.47	• 715	• 724	-7.443	18.633	16.164	263.066
29	• 2078	• 306	74.56	73.30	• 726	• 727	-7.133	18.943	16.454	296.222
30	• 2079	• 306	75.50	73.17	• 730	• 750	-6.818	19.255	16.742	328.846
31	• 2080	• 306	76.44	73.07	• 734	• 758	-6.471	19.624	16.927	362.347
32	• 2081	• 306	77.38	73.07	• 752	• 766	-6.226	19.850	17.109	393.267
33	• 2082	• 306	78.32	72.98	• 761	• 777	-5.915	20.161	17.356	427.354
34	• 2083	• 306	79.26	72.98	• 773	• 786	-5.697	20.379	17.649	458.647
35	• 2084	• 306	80.20	72.98	• 782	• 797	-5.445	20.671	17.786	492.175
36	• 2085	• 306	81.12	72.94	• 791	• 806	-5.195	20.881	17.996	523.655
37	• 2086	• 306	82.06	72.90	• 801	• 814	-4.932	21.144	18.182	557.183
38	• 2087	• 306	83.00	71.86	• 811	• 825	-4.633	21.463	18.421	622.935
39	• 2088	• 306	84.04	71.83	• 830	• 845	-4.410	22.166	18.876	687.943
40	• 2089	• 306	85.01	71.83	• 846	• 856	-3.577	22.409	19.104	763.509
41	• 2090	• 306	86.97	71.77	• 853	• 867	-3.132	22.943	19.357	818.703
42	• 2091	• 306	87.92	71.71	• 860	• 876	-2.798	23.278	19.747	883.524
43	• 2092	• 306	88.86	71.65	• 867	• 887	-2.431	23.645	20.125	948.532
44	• 2093	• 306	89.80	71.60	• 870	• 897	-2.095	23.981	20.324	1014.284
45	• 2094	• 306	90.74	71.56	• 876	• 895	-1.810	24.321	20.491	1179.105
46	• 2095	• 306	91.68	71.52	• 883	• 895	-1.646	24.611	20.745	1209.493
47	• 2096	• 306	92.62	71.48	• 890	• 907	-1.420	21.067	21.067	1274.873
48	• 2097	• 306	93.56	71.43	• 900	• 917	-1.240	21.224	21.224	1340.253
49	• 2098	• 306	94.50	71.38	• 910	• 929	-1.065	21.420	21.696	1405.633
50	• 2099	• 306	95.44	71.33	• 918	• 939	-1.055	21.716	21.831	1470.268
51	• 2100	• 306	96.38	71.28	• 929	• 946	-1.046	21.976	21.976	1535.834
52	• 2101	• 306	97.32	71.23	• 944	• 943	-1.046	22.185	21.444	1599.299
53	• 2102	• 306	98.26	71.17	• 954	• 950	-1.041	22.485	21.665	1665.877
54	• 2103	• 306	99.20	71.12	• 964	• 955	-1.041	22.785	22.265	1731.843
55	• 2104	• 306	99.14	71.06	• 972	• 962	-1.041	23.135	22.224	1796.600
56	• 2105	• 306	99.08	71.01	• 982	• 972	-1.041	23.336	22.420	1861.989
57	• 2106	• 306	99.02	70.96	• 986	• 978	-1.039	23.577	22.696	1945.633
58	• 2107	• 306	98.96	70.91	• 991	• 984	-1.039	23.837	22.976	2032.204
59	• 2108	• 306	98.90	70.86	• 994	• 992	-1.045	24.145	22.197	2100.283
60	• 2109	• 306	98.84	70.81	• 997	• 994	-1.067	24.989	22.495	2165.877
61	• 2110	• 306	98.78	70.76	• 997	• 997	-1.034	25.042	22.265	21731.843
62	• 2111	• 306	98.72	70.71	• 999	• 998	-1.030	25.046	22.296	21796.600
63	• 2112	• 306	98.66	70.66	• 999	• 998	-1.037	25.668	22.363	21861.989
64	• 2113	• 306	98.60	70.61	• 999	• 999	-1.037	26.059	22.357	21925.392
65	• 2114	• 306	98.54	70.56	• 999	• 999	-1.037	26.059	22.357	21957.932
66	• 2115	• 306	98.48	70.51	• 999	• 999	-1.037	26.059	22.357	21989.913
67	• 2116	• 306	98.42	70.46	• 999	• 999	-1.037	26.059	22.357	21989.913
68	• 2117	• 306	98.36	70.41	• 999	• 999	-1.037	26.059	22.357	21989.913
69	• 2118	• 306	98.30	70.36	• 999	• 999	-1.037	26.059	22.357	21989.913
70	• 2119	• 306	98.24	70.31	• 999	• 999	-1.037	26.059	22.357	21989.913
71	• 2120	• 306	98.18	70.26	• 999	• 999	-1.037	26.059	22.357	21989.913
72	• 2121	• 306	98.12	70.21	• 999	• 999	-1.037	26.059	22.357	21989.913
73	• 2122	• 306	98.06	70.16	• 999	• 999	-1.037	26.059	22.357	21989.913
74	• 2123	• 306	97.99	70.11	• 999	• 999	-1.037	26.059	22.357	21989.913
75	• 2124	• 306	97.93	70.06	• 999	• 999	-1.037	26.059	22.357	21989.913
76	• 2125	• 306	97.87	70.01	• 999	• 999	-1.037	26.059	22.357	21989.913
77	• 2126	• 306	97.81	9.96	• 999	• 999	-1.037	26.059	22.357	21989.913
78	• 2127	• 306	97.75	9.91	• 999	• 999	-1.037	26.059	22.357	21989.913
79	• 2128	• 306	97.69	9.86	• 999	• 999	-1.037	26.059	22.357	21989.913
80	• 2129	• 306	97.63	9.81	• 999	• 999	-1.037	26.059	22.357	21989.913
81	• 2130	• 306	97.57	9.76	• 999	• 999	-1.037	26.059	22.357	21989.913
82	• 2131	• 306	97.51	9.71	• 999	• 999	-1.037	26.059	22.357	21989.913
83	• 2132	• 306	97.45	9.66	• 999	• 999	-1.037	26.059	22.357	21989.913
84	• 2133	• 306	97.39	9.61	• 999	• 999	-1.037	26.059	22.357	21989.913
85	• 2134	• 306	97.33	9.56	• 999	• 999	-1.037	26.059	22.357	21989.913
86	• 2135	• 306	97.27	9.51	• 999	• 999	-1.037	26.059	22.357	21989.913
87	• 2136	• 306	97.21	9.46	• 999	• 999	-1.037	26.059	22.357	21989.913
88	• 2137	• 306	97.15	9.41	• 999	• 999	-1.037	26.059	22.357	21989.913
89	• 2138	• 306	97.09	9.36	• 999	• 999	-1.037	26.059	22.357	21989.913
90	• 2139	• 306	97.03	9.31	• 999	• 999	-1.037	26.059	22.357	21989.913
91	• 2140	• 306	96.97	9.26	• 999	• 999	-1.037	26.059	22.357	21989.913
92	• 2141	• 306	96.91	9.21	• 999	• 999	-1.037	26.059	22.357	21989.913
93	• 2142</									

JOE KLD02 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 03/29/79

RUN NO. 5. POINT 18. NO GRID

BOUNDARY LAYER PROPERTIES

		STANDARD LINEAR INTERPOLATION	SUBLAYER FUNCTION FROM TO WALL WALL TO Y+ = 35
FREE STREAM VELOCITY	= 99.313		99.313
FREE STREAM TEMPERATURE	= 68.674		
WALL TEMPERATURE	= 85.360		
WALL HEAT FLUX	= .04968		
FREE STREAM DENSITY	= .07556		
FREE STREAM KINEMATIC VISCOSITY	= .0001615		
DENSITY OF FLUID AT WALL	= .07325		
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001706		
WALL/FREE STREAM DENSITY RATIO	= .96939		
LOCATION REYNOLDS NUMBER (REX)	= 3901397.53		
INPUT VALUE OF VELOCITY DELTA	= 1.15000		
INPUT VALUE OF TEMPERATURE DELTA	= 1.15000		
CALCULATED DELTA			1.03442
DELTA 99.5% INPUT	= .00000		
DISPLACEMENT THICKNESS (DELSTAR)	= .15330		.15355
MOMENTUM THICKNESS (THETA)	= .10874		.10880
ENERGY-DISSIPATION THICKNESS	= .19236		.19231
ENTHALPY THICKNESS	= .00375		.00375
SHAPE FACTOR 12 (DELSTAR/THETA)	= 1.40987		1.41132
SHAPE FACTOR 32 (ENERGY/THETA)	= 1.76904		1.76756
MOMENTUM THICKNESS REYNOLDS NUMBER	= 5573.07		5576.46
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 7557.31		7870.19
SKIN FRICTION COEFFICIENT	= .002807		
FRICTION VELOCITY	= 3.77872		
LAW OF THE WALL CONSTANT (K)	= .41000		
LAW OF THE WALL CONSTANT (C)	= 5.00000		
WAKE STRENGTH			.58565
CLAUSER'S "DELTA" INTEGPAL	= -3.80619		-3.93718
CLAUSER'S "G" INTEGPAL	= 27.62262		27.75020
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .14718		.14980
MOMENTUM THICKNESS - CONSTANT DENSITY	= .10956		.10963
SHAPE FACTOR 12 - CONSTANT DENSITY	= 1.34341		1.36645
LOCATION -X-	76.12000		
Z = CENTERLINE			

Table 13.

JCH KLD02 TAPE 3166R- FILES C1-21, PUNS 5.01-5.21 03/09/79

RUN NO. 5. POTNT 18. NO GRID

REFINED PROFILE DATA

	Y/INCHES	U/FT SEC	T/SEC	DEG F	U/UF	THE TA	UTAU	U(+)	T(+)	Y(+)
1	1.000	32.27	81.30	371	243	-17.593	8.609	5.430	8.732	
2	1.000	34.77	80.81	370	201	-17.186	9.298	4.988	10.576	
3	1.000	37.75	79.86	380	230	-16.929	9.489	7.352	12.606	
4	1.000	41.25	78.95	415	354	-15.768	10.904	7.909	14.452	
5	1.000	44.75	78.34	445	384	-14.628	11.694	8.575	16.451	
6	1.000	46.60	78.14	475	421	-13.583	12.356	9.382	20.173	
7	1.000	49.05	77.67	503	473	-13.564	12.718	9.651	21.465	
8	1.000	51.24	77.36	526	461	-12.721	13.218	10.278	25.717	
9	1.000	52.24	77.01	543	407	-12.456	13.561	10.692	29.032	
10	1.000	52.77	76.71	553	514	-12.053	13.826	11.301	35.329	
11	1.000	54.46	76.57	546	529	-11.870	14.412	11.469	38.261	
12	1.000	55.13	76.32	556	448	-11.507	14.775	12.227	41.082	
13	1.000	56.16	76.03	565	553	-11.420	15.282	12.314	45.644	
14	1.000	57.74	75.83	581	571	-11.110	15.676	13.147	49.334	
15	1.000	58.24	75.51	589	609	-10.606	16.066	13.436	53.019	
16	1.000	60.51	75.21	629	611	-10.266	16.418	13.637	57.731	
17	1.000	61.51	75.16	619	626	-9.720	16.563	13.963	61.740	
18	1.000	62.32	74.93	632	638	-9.522	16.760	14.240	66.660	
19	1.000	64.07	74.73	647	643	-9.284	16.998	14.552	70.180	
20	1.000	64.73	74.51	656	650	-9.041	17.241	14.407	75.478	
21	1.000	65.24	74.21	664	659	-8.831	17.451	14.705	80.029	
22	1.000	66.11	74.03	668	665	-8.734	17.548	14.827	84.472	
23	1.000	67.63	73.93	675	675	-8.533	17.749	15.057	88.222	
24	1.000	68.01	73.80	689	679	-8.385	17.898	15.146	92.942	
25	1.000	68.64	73.70	697	694	-8.154	18.126	15.219	97.305	
26	1.000	69.71	73.57	709	707	-7.635	18.315	15.490	102.225	
27	1.000	70.71	73.33	723	720	-7.218	18.770	15.770	106.601	
28	1.000	72.43	73.23	731	727	-7.068	19.004	16.062	110.270	
29	1.000	73.81	73.13	743	740	-6.745	19.214	16.224	113.569	
30	1.000	73.99	73.03	753	747	-6.497	19.785	16.671	116.422	
31	1.000	73.80	72.93	761	756	-6.295	19.902	16.866	121.021	
32	1.000	73.78	72.80	771	766	-6.016	20.266	17.062	126.397	
33	1.000	73.57	72.67	782	774	-5.732	20.551	17.280	130.620	
34	1.000	71.21	72.33	799	786	-5.559	20.723	17.545	133.569	
35	1.000	71.21	72.27	802	795	-5.379	21.000	17.747	136.422	
36	1.000	71.21	72.13	809	817	-4.691	21.591	18.220	140.555	
37	1.000	71.21	72.03	817	812	-4.121	22.162	18.671	145.323	
38	1.000	71.21	71.93	822	817	-3.529	22.753	19.138	149.667	
39	1.000	71.21	71.83	822	827	-3.062	23.300	19.444	154.273	
40	1.000	71.21	71.73	834	829	-2.631	23.752	19.635	158.633	
41	1.000	71.21	71.63	834	829	-2.268	24.215	20.210	162.055	
42	1.000	71.21	71.53	834	834	-1.841	24.641	20.516	162.961	
43	1.000	71.21	71.43	843	843	-1.426	25.120	20.810	167.621	
44	1.000	71.21	71.33	843	847	-1.016	25.372	21.131	171.935	
45	1.000	71.21	71.23	856	861	-6.25	25.657	21.450	175.833	
46	1.000	71.21	71.13	867	867	-5.831	25.924	21.653	181.439	
47	1.000	71.21	71.03	874	874	-5.559	26.723	17.747	186.587	
48	1.000	71.21	70.93	876	876	-5.279	27.000	17.747	190.555	
49	1.000	71.21	70.83	879	879	-5.000	27.591	18.671	195.323	
50	1.000	71.21	70.73	886	886	-4.721	28.162	19.138	200.667	
51	1.000	71.21	70.63	892	892	-4.444	28.753	19.635	205.055	
52	1.000	71.21	70.53	899	899	-4.164	29.352	20.210	210.555	
53	1.000	71.21	70.43	906	906	-3.884	29.952	20.710	215.055	
54	1.000	71.21	70.33	913	913	-3.604	30.552	21.210	220.444	
55	1.000	71.21	70.23	919	919	-3.324	31.151	21.710	225.444	
56	1.000	71.21	70.13	921	921	-3.044	31.750	22.210	230.284	
57	1.000	71.21	70.03	928	928	-2.764	32.349	22.707	235.395	
58	1.000	71.21	69.93	935	935	-2.484	33.312	23.212	247.185	
59	1.000	71.21	69.83	942	942	-2.204	34.309	23.666	256.607	
60	1.000	71.21	69.73	949	949	-1.924	35.305	24.230	266.4290	
61	1.000	71.21	69.63	956	956	-1.644	36.309	24.836	276.0281	
62	1.000	71.21	69.53	963	963	-1.364	37.305	25.436	285.610	
63	1.000	71.21	69.43	970	970	-1.084	38.314	26.031	295.2400	
64	1.000	71.21	69.33	977	977	-8.12	22.231	30.48	304.8191	
65	1.000	71.21	69.23	984	984	-8.09	22.292	31.39	314.3082	
66	1.000	71.21	69.13	991	991	-8.04	22.496	31.529	319.43529	
67	1.000	71.21	69.03	998	998	-8.01	22.697	31.711	324.21546	
68	1.000	71.21	68.93	1000	1000	-7.98	22.891	31.897	329.8414	
69	1.000	71.21	68.83	1000	1000	-7.95	23.084	32.083	330.7558	
70	1.000	71.21	68.73	1000	1000	-7.92	23.279	32.279	330.9441	
71	1.000	71.21	68.63	1000	1000	-7.89	23.476	32.476	331.1328	

Table 13.

JOB KLD02 TAPE 3166R- FILES C1-21, PUNS 5.01-E.21 03/09/79
 RUN NO. 5. POINT 19. NO GRID

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	SUPERLAYER FUNCTION FROM WALL TO Y+=35	STANDARD
FREE STREAM VELOCITY =	99.216	99.216	
FREE STREAM TEMPERATURE =	68.650		
WALL TEMPERATURE =	85.320		
WALL HEAT FLUX =	.05023		
FREE STREAM DENSITY =	.07557		
FREE STREAM KINEMATIC VISCOSITY =	.0001615		
DENSITY OF FLUID AT WALL =	.07326		
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001706		
WALL/FREE STREAM DENSITY RATIO =	.96941		
LOCATION REYNOLDS NUMBER (REX) =	38978E5.16		
INPUT VALUE OF VELOCITY DELTA =	1.00000		
INPUT VALUE OF TEMPERATURE DELTA =	1.20000		
CALCULATED DELTA =			1.02303
DELTA 99.5% INPUT =	.00000		
DISPLACEMENT THICKNESS (DELSTAR) =	.15391		.15404
MOMENTUM THICKNESS (THETA) =	.10885		
ENERGY-DISSIPATION THICKNESS =	.19235		.19238
ENTHALPY THICKNESS =	.00397		.00397
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.41530		1.41512
SHAPE FACTOR 32 (ENERGY/THETA) =	1.76731		
MOMENTUM THICKNESS REYNOLDS NUMBER =	5574.14		
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	7688.09		
SKIN FRICTION COEFFICIENT =	.002785		
FRICTION VELOCITY =	3.76024		
LAW OF THE WALL CONSTANT (K) =	.41000		
LAW OF THE WALL CONSTANT (C) =	5.00000		
WAKE STRENGTH =			.61476
CLAESERS "DELTA" INTEGRAL =	-3.82406		-3.06070
CLAESERS "C" INTEGRAL =	2P.05329		2P.10847
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.14744		.15009
MOMENTUM THICKNESS - CONSTANT DENSITY =	.10961		.10972
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.34521		1.36798

LOCATION -X- 76.12000
 Z = +6 INCHES

Table 14.

JOB KLD02 TAPE 3166P- FILES 01-21, RUNS 5.01-5.21 03/09/79

RUN NO. E. POINT 19.

NO GRID

REDUCED PROFILE DATA

N	Y INCHES	V/ DELTA	U FT/SEC	T DEG.F	U/U _F	THF TA	U-U _F	U(U)	T(0)	V(0)
1	• 00563	• 025	30.72	60.91	• 323	• 265	-17.871	5.515	5.8C4	9.240
2	• 00563	• 025	35.72	60.91	• 323	• 311	-17.024	9.362	6.829	11.620
3	• 00563	• 025	39.49	70.64	• 328	• 341	-16.149	7.478	7.478	13.281
4	• 00563	• 025	41.15	70.17	• 415	• 369	-15.441	10.236	8.097	15.118
5	• 00563	• 025	44.52	78.70	• 449	• 267	-14.547	11.839	8.707	17.077
6	• 00563	• 025	46.74	78.05	• 466	• 412	-14.087	12.298	9.043	20.077
7	• 00563	• 025	49.50	78.13	• 493	• 431	-13.636	12.066	9.466	22.533
8	• 00563	• 025	51.62	77.67	• 490	• 459	-13.221	13.665	10.429	26.139
9	• 00563	• 025	56.92	77.40	• 513	• 475	-12.841	13.544	10.733	29.013
10	• 00563	• 025	56.92	77.17	• 532	• 489	-12.350	13.027	10.962	33.024
11	• 00563	• 025	56.74	76.99	• 576	• 500	-12.241	14.045	11.135	36.242
12	• 00563	• 025	53.19	76.86	• 544	• 528	-12.029	14.356	11.340	38.813
13	• 00563	• 025	54.55	76.52	• 558	• 517	-11.876	14.529	11.585	42.120
14	• 00563	• 025	55.73	76.52	• 558	• 528	-11.652	14.534	11.761	46.528
15	• 00563	• 025	55.73	76.71	• 562	• 541	-11.553	14.832	11.859	52.774
16	• 00563	• 025	55.77	76.74	• 577	• 557	-11.466	15.215	12.211	64.530
17	• 00563	• 025	56.08	75.86	• 545	• 580	-10.674	15.711	12.720	76.120
18	• 00563	• 025	56.08	75.85	• 605	• 592	-10.416	15.569	12.981	90.430
19	• 00563	• 025	56.08	75.85	• 616	• 600	-10.143	16.243	13.153	101.635
20	• 00563	• 025	61.07	75.21	• 629	• 607	-9.797	16.889	13.307	114.126
21	• 00563	• 025	62.37	74.01	• 646	• 624	-9.553	16.633	13.605	127.351
22	• 00563	• 025	63.36	74.01	• 653	• 631	-9.349	17.276	13.850	138.373
23	• 00563	• 025	64.74	74.01	• 660	• 641	-9.156	17.299	14.071	150.496
24	• 00563	• 025	64.74	74.01	• 667	• 646	-8.981	17.475	14.178	163.722
25	• 00563	• 025	66.14	74.48	• 674	• 650	-8.797	17.548	14.263	174.376
26	• 00563	• 025	66.14	74.26	• 679	• 663	-8.589	17.926	14.488	187.418
27	• 00563	• 025	67.41	74.26	• 686	• 659	-8.297	18.029	14.672	200.092
28	• 00563	• 025	69.16	74.17	• 691	• 676	-8.158	18.237	14.824	223.788
29	• 00563	• 025	69.16	73.06	• 697	• 682	-7.986	18.399	14.959	237.781
30	• 00563	• 025	70.43	73.76	• 710	• 694	-7.655	18.731	15.217	268.792
31	• 00563	• 025	71.70	73.23	• 723	• 707	-7.318	19.068	15.519	300.570
32	• 00563	• 025	72.69	73.29	• 735	• 721	-6.702	19.384	15.828	332.716
33	• 00563	• 025	73.94	73.16	• 745	• 729	-6.722	19.664	16.000	365.596
34	• 00563	• 025	73.94	73.16	• 754	• 727	-6.481	19.904	16.163	397.747
35	• 00563	• 025	74.84	73.34	• 766	• 748	-6.177	20.206	16.407	429.887
36	• 00563	• 025	75.99	72.85	• 773	• 755	-5.986	20.399	16.572	461.298
37	• 00563	• 025	76.71	72.35	• 784	• 764	-5.706	20.675	16.764	495.797
38	• 00563	• 025	77.75	72.35	• 795	• 775	-5.535	20.647	17.003	526.147
39	• 00563	• 025	78.36	72.25	• 799	• 784	-5.296	21.000	17.199	559.720
40	• 00563	• 025	79.70	72.25	• 823	• 794	-4.679	21.776	17.646	653.836
41	• 00563	• 025	81.67	72.01	• 823	• 755	-4.113	22.273	18.099	747.301
42	• 00563	• 025	83.75	71.57	• 844	• 742	-3.547	22.838	18.474	842.820
43	• 00563	• 025	85.98	71.28	• 866	• 662	-3.032	23.353	18.915	936.522
44	• 00563	• 025	86.98	70.05	• 885	• 779	-2.636	23.600	19.288	1034.223
45	• 00563	• 025	87.91	70.67	• 904	• 898	-2.081	24.304	19.710	1130.667
46	• 00563	• 025	89.62	70.34	• 921	• 915	-1.652	24.733	20.078	1224.709
47	• 00563	• 025	91.39	70.34	• 927	• 928	-1.296	25.095	20.358	1320.227
48	• 00563	• 025	97.70	70.36	• 951	• 943	-1.947	25.439	20.688	1415.378
49	• 00563	• 025	70.33	69.34	• 964	• 955	-1.633	25.752	20.949	1509.799
50	• 00563	• 025	75.53	69.66	• 976	• 970	-1.395	25.991	21.292	1605.312
51	• 00563	• 025	96.93	69.80	• 976	• 980	-2.16	26.170	21.503	1701.565
52	• 00563	• 025	97.73	69.14	• 985	• 980	-2.16	26.286	21.606	1796.349
53	• 00563	• 025	98.41	68.96	• 992	• 980	-2.16	26.286	21.606	1796.349
54	• 00563	• 025	98.41	68.90	• 996	• 989	-1.003	26.383	21.697	1891.899
55	• 00563	• 025	99.20	69.93	1.000	• 994	-0.611	26.375	21.826	1981.834
56	• 00563	• 025	99.20	69.91	1.000	• 998	-0.601	26.397	21.860	2081.834
57	• 00563	• 025	99.22	69.69	1.000	• 999	-1.010	26.395	21.927	2176.585
58	• 00563	• 025	99.22	69.65	1.000	• 999	-1.002	26.394	21.925	2272.103
59	• 00563	• 025	99.21	69.60	1.000	• 999	-1.006	26.395	21.935	2367.804
60	• 00563	• 025	99.21	69.55	1.000	• 999	-1.006	26.393	21.958	2558.290
61	• 00563	• 025	99.19	69.64	1.000	• 999	-1.006	26.395	21.965	2558.290
62	• 00563	• 025	99.19	68.63	1.000	• 999	-1.006	26.395	21.932	2652.319
63	• 00563	• 025	99.23	68.64	1.000	• 999	-1.006	26.395	21.949	2748.224
64	• 00563	• 025	99.22	68.65	1.000	• 999	-1.006	26.397	21.931	2843.026
65	• 00563	• 025	99.21	68.66	1.000	• 999	-1.006	26.391	21.926	2938.894
66	• 00563	• 025	99.16	68.66	1.000	• 999	-1.006	26.392	21.913	3035.330
67	• 00563	• 025	99.24	68.67	1.000	• 999	-1.006	26.391	21.910	3130.297
68	• 00563	• 025	99.24	68.70	1.000	• 999	-1.006	26.391	21.910	3130.297
69	• 00563	• 025	99.17	68.67	1.000	• 999	-1.006	26.392	21.910	3130.297
70	• 00563	• 025	99.26	68.70	1.000	• 999	-1.006	26.392	21.910	3130.297
71	• 00563	• 025	99.26	68.77	1.000	• 993	-0.612	26.398	21.783	5518.98

Table 14.

JOB KLD22 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 03/09/79

RUN NO. F. POINT 2C. NO GRID

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION	STANDARD FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY	= 99.452	99.452
FREE STREAM TEMPERATURE	= 68.400	
WALL TEMPERATURE	= 84.850	
WALL HEAT FLUX	= .04985	
FREE STREAM DENSITY	= .07538	
FREE STREAM KINEMATIC VISCOSITY	= .0001618	
DENSITY OF FLUID AT WALL	= .07310	
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001708	
WALL/FREE STREAM DENSITY RATIO	= .96979	
LOCATION REYNOLDS NUMBER (REY)	= 3898767.47	
INPUT VALUE OF VELOCITY DELTA	= 1.00000	
INPUT VALUE OF TEMPERATURE DELTA	= 1.05000	
CALCULATED DELTA		.92057
DELTA 59.5% INPUT	= .00000	
DISPLACEMENT THICKNESS (DELSTAR)	= .14019	.14035
MOMENTUM THICKNESS (THETA)	= .09830	.09844
ENERGY-DISSIPATION THICKNESS	= .17360	.17365
ENTHALPY THICKNESS	= .00371	.00371
SHAPE FACTOR 12 (DELSTAR/THETA)	= 1.42610	1.42572
SHAPE FACTOR 32 (ENERGY/THETA)	= 1.76603	1.76397
MOMENTUM THICKNESS REYNOLDS NUMBER	= 5034.87	5042.06
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 7182.24	7188.56
SKIN FRICTION COEFFICIENT	= .002830	
FRICTION VELOCITY	= 3.79868	
LAW OF THE WALL CONSTANT (K)	= .41000	
LAW OF THE WALL CONSTANT (C)	= 5.00000	
WAKE STRENGTH		.62089
CLAUSER'S "DELTA" INTEGRAL	= -3.42801	-3.57733
CLAUSER'S "G" INTEGRAL	= 25.60153	25.61305
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .13371	.13664
MOMENTUM THICKNESS - CONSTANT DENSITY	= .09912	.09926
SHAPE FACTOR 12 - CONSTANT DENSITY	= 1.34898	1.37649

LOCATION -X- 76.12020
Z = -6 INCHES

Table 15.

JOB KLD02 TAPE 3166R- FILES C1-21, PUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 20. NO GRID

REDUCED PROFILE DATA

N	Y INCHES	Y/	U DELTA	Ft/sec	T DEG F	U/Uf	THFTA	U-UE	U+1	T(+)	Y(+)
1	.0055	.005	.35	.06	.00	.21	.353	.252	-16.951	6.198	10.247
2	.0066	.007	.35	.06	.00	.21	.353	.252	-16.155	7.154	12.656
3	.0078	.009	.40	.06	.00	.21	.410	.350	-15.439	7.707	14.509
4	.0089	.010	.43	.06	.00	.21	.436	.374	-14.761	8.232	16.362
5	.0098	.011	.45	.06	.00	.21	.456	.397	-14.237	8.722	18.215
6	.0117	.012	.47	.06	.00	.21	.479	.421	-13.631	9.269	20.995
7	.0126	.014	.49	.06	.00	.21	.494	.446	-13.242	9.593	23.775
8	.0136	.015	.50	.06	.00	.21	.503	.446	-13.005	9.799	25.628
9	.0160	.017	.51	.06	.00	.21	.520	.466	-12.566	10.282	29.704
10	.0198	.020	.52	.05	.01	.21	.531	.477	-12.268	10.482	33.810
11	.0214	.022	.54	.05	.01	.21	.540	.486	-12.036	12.736	36.746
12	.0226	.023	.54	.05	.01	.21	.546	.501	-11.981	11.012	39.711
13	.0246	.025	.54	.05	.01	.21	.550	.511	-11.787	11.232	41.934
14	.0256	.027	.55	.05	.01	.21	.557	.522	-11.565	11.472	45.640
15	.0266	.029	.56	.05	.01	.21	.565	.517	-11.397	11.361	49.346
16	.0274	.033	.56	.04	.01	.21	.568	.521	-11.311	11.459	53.053
17	.0295	.040	.56	.04	.01	.21	.573	.520	-11.178	11.647	56.388
18	.0336	.048	.58	.04	.01	.21	.583	.555	-10.792	12.211	67.877
19	.0345	.053	.58	.04	.01	.21	.602	.573	-10.430	12.600	81.589
20	.0351	.059	.58	.04	.01	.21	.615	.584	-10.083	12.852	94.561
21	.0368	.062	.61	.15	.01	.21	.625	.605	-9.828	13.325	118.836
22	.0364	.070	.63	.16	.01	.21	.636	.626	-9.527	13.535	131.807
23	.0371	.077	.64	.16	.01	.21	.646	.645	-9.266	13.700	142.554
24	.0376	.084	.64	.16	.01	.21	.653	.663	-9.090	14.779	155.711
25	.0384	.091	.65	.16	.01	.21	.661	.677	-8.825	15.047	168.126
26	.0397	.099	.66	.16	.01	.21	.669	.679	-8.672	15.678	179.759
27	.0406	.105	.67	.16	.01	.21	.675	.684	-8.501	16.338	192.957
28	.0411	.113	.67	.16	.01	.21	.681	.692	-8.351	17.829	205.558
29	.0419	.121	.68	.16	.01	.21	.687	.698	-8.163	18.906	216.305
30	.0426	.127	.68	.16	.01	.21	.692	.705	-8.056	19.123	229.833
31	.0430	.135	.69	.16	.01	.21	.700	.712	-7.859	19.322	242.063
32	.0436	.142	.69	.16	.01	.21	.704	.716	-7.755	19.424	273.750
33	.0447	.147	.71	.23	.01	.21	.716	.723	-7.428	19.751	336.363
34	.0453	.150	.72	.24	.01	.21	.723	.730	-7.365	19.914	338.236
35	.0462	.159	.73	.24	.01	.21	.729	.737	-7.364	19.916	372.146
36	.0468	.166	.73	.24	.01	.21	.733	.745	-6.724	15.943	403.648
37	.0476	.176	.74	.24	.01	.21	.744	.734	-6.169	16.137	436.532
38	.0486	.177	.74	.24	.01	.21	.756	.742	-5.698	16.316	468.319
39	.0496	.186	.75	.24	.01	.21	.763	.753	-5.689	16.552	502.415
40	.0507	.195	.76	.24	.01	.21	.773	.762	-5.422	16.752	533.361
41	.0511	.203	.76	.23	.01	.21	.783	.775	-5.165	17.041	566.716
42	.0518	.209	.76	.23	.01	.21	.793	.783	-4.902	17.167	662.332
43	.0524	.216	.76	.23	.01	.21	.803	.791	-4.724	17.21	757.023
44	.0535	.227	.76	.22	.01	.21	.813	.806	-4.221	21.058	853.566
45	.0545	.236	.77	.22	.01	.21	.823	.817	-3.909	21.799	850.295
46	.0556	.242	.77	.22	.01	.21	.833	.825	-3.600	19.257	1046.654
47	.0564	.257	.78	.23	.01	.21	.843	.835	-3.300	19.683	1142.641
48	.0574	.267	.78	.23	.01	.21	.853	.845	-3.009	20.135	1238.628
49	.0585	.275	.78	.23	.01	.21	.863	.855	-2.709	21.276	1334.986
50	.0595	.286	.79	.23	.01	.21	.873	.865	-2.409	21.776	1430.237
51	.0618	.295	.79	.23	.01	.21	.883	.877	-2.109	21.942	1527.332
52	.0624	.305	.79	.23	.01	.21	.891	.880	-2.337	21.562	1623.138
53	.0634	.313	.79	.23	.01	.21	.903	.893	-2.037	21.850	1719.122
54	.0644	.313	.79	.23	.01	.21	.909	.909	-1.717	21.973	1815.109
55	.0659	.320	.80	.23	.01	.21	.913	.916	-1.498	21.973	1911.282
56	.0674	.328	.80	.23	.01	.21	.923	.929	-1.265	21.973	20.004
57	.0684	.332	.80	.23	.01	.21	.933	.939	-1.065	21.973	20.877.763
58	.0694	.338	.80	.23	.01	.21	.943	.949	-8.73	22.022	21.026.158
59	.0704	.345	.80	.23	.01	.21	.953	.959	-6.37	21.994	21.992.559
60	.0717	.353	.80	.23	.01	.21	.963	.968	-4.037	21.945	22.95.607
61	.0727	.364	.80	.23	.01	.21	.973	.978	-1.037	21.992	23.91.005
62	.0737	.374	.80	.23	.01	.21	.983	.986	-0.813	21.961	25.83.751
63	.0747	.384	.80	.23	.01	.21	.993	.997	-0.600	21.929	26.78.812
64	.0757	.394	.80	.23	.01	.21	.997	.997	-0.402	21.974	27.74.985
65	.0767	.404	.80	.23	.01	.21	.997	.994	-0.204	21.971	28.71.528
66	.0776	.414	.80	.23	.01	.21	.997	.997	-0.018	21.935	29.67.886
67	.0786	.424	.80	.23	.01	.21	.996	.996	-0.036	21.904	30.64.244
68	.0796	.434	.80	.23	.01	.21	.996	.996	-0.019	21.898	31.65.603
69	.0806	.444	.80	.23	.01	.21	.996	.996	-0.006	21.872	30.62.784
70	.0816	.454	.80	.23	.01	.21	.996	.996	-0.019	21.850	30.62.784
71	.0826	.464	.80	.23	.01	.21	.996	.996	-0.006	21.830	30.62.784
72	.0836	.474	.80	.23	.01	.21	.996	.996	-0.018	21.763	30.62.784

Table 15.

JOB KL002 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 21. NO GRID

BOUNDARY LAYER PROPERTIES

		LINEAR INTERPOLATION TO WALL	SUPERLAYER FUNCTION FROM WALL TO $y+=35$	STANDARD
FREE STREAM VELOCITY	=	99.386	99.386	
FREE STREAM TEMPERATURE	=	68.701		
WALL TEMPERATURE	=	85.150		
WALL HEAT FLUX	=	.05040		
FREE STREAM DENSITY	=	.07533		
FREE STREAM KINEMATIC VISCOSITY	=	.0001620		
DENSITY OF FLUID AT WALL	=	.07306		
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.0001710		
WALL/FREE STREAM DENSITY RATIO	=	.96981		
LOCATION REYNOLDS NUMBER (REX)	=	4300270.75		
INPUT VALUE OF VELOCITY DELTA	=	1.16000		
INPUT VALUE OF TEMPERATURE DELTA	=	1.20000		
CALCULATED DELTA	=		1.12000	
DELTA 99.5% INPUT	=	.00000		
DISPLACEMENT THICKNESS (DELSTAR)	=	.16717	.16724	
MOMENTUM THICKNESS (THETA)	=	.11853	.11873	
ENERGY-DISSIPATION THICKNESS	=	.20985	.20997	
ENTHALPY THICKNESS	=	.00411	.00412	
SHAPE FACTOR 12 (DELSTAR/THETA)	=	1.41039	1.40859	
SHAPE FACTOR 32 (ENEPGY/THETA)	=	1.77047	1.76849	
MOMENTUM THICKNESS REYNOLDS NUMBER	=	6060.58	6070.91	
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	8547.72	8551.42	
SKIN FRICTION COEFFICIENT	=	.002744		
FRICITION VELOCITY	=	3.73840		
LAW OF THE WALL CONSTANT (K)	=	.41000		
LAW OF THE WALL CONSTANT (C)	=	5.00000		
WAKE STRENGTH	=		.61452	
CLAUSERS "DELTA" INTGPAL	=	-4.16672	-4.33686	
CLAUSERS "G" INTGPAL	=	30.84027	30.74177	
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.15990	.16313	
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.11943	.11963	
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.33887	1.36357	
LOCATION -Y-	=	84.10001		
Z = CENTERLINE				

Table 16.

JOB KLD02 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 03/09/79

RUN NO. S. POINT 21. NO GRID

REDUCED PROFILE DATA

N	Y INCHES	Y/ INCHES	U DELTA	T FT/SEC	DEG.F	U/UF	THFTA	U-TAU	U-UE	U(+)	T(+)	V(+)
1	.0067	.0067	36.75	70.87	.365	.371	-16.876	9.729	6.573	11.532		
2	.0074	.0074	36.38	70.44	.386	.372	-16.318	10.267	7.421	13.536		
3	.0083	.0083	41.51	70.74	.408	.372	-15.748	10.837	7.950	15.175		
4	.0104	.0104	43.34	70.61	.436	.398	-14.999	11.586	8.510	17.361		
5	.0121	.0121	44.47	70.39	.452	.411	-14.556	12.629	8.798	19.201		
6	.0139	.0139	45.14	70.73	.476	.423	-13.943	12.642	9.259	22.298		
7	.0149	.0149	49.87	70.50	.494	.454	-13.440	13.145	9.706	25.777		
8	.0165	.0165	51.16	70.29	.520	.465	-13.246	13.339	9.947	27.194		
9	.0174	.0174	52.76	70.12	.515	.476	-12.960	13.685	10.221	30.114		
10	.0184	.0184	53.53	70.87	.524	.483	-12.407	13.974	10.641	32.122		
11	.0221	.0221	53.13	70.73	.533	.512	-12.267	14.179	10.769	37.219		
12	.0230	.0230	54.16	70.53	.539	.516	-12.054	14.318	10.954	40.216		
13	.0258	.0258	54.65	70.49	.545	.526	-11.968	14.617	11.080	43.595		
14	.0277	.0277	55.34	70.49	.557	.534	-11.968	14.804	11.429	47.756		
15	.0295	.0295	55.87	70.23	.559	.542	-11.721	14.864	11.605	53.797		
16	.0311	.0311	56.11	70.11	.565	.556	-11.577	15.053	11.764	56.712		
17	.0347	.0347	57.55	70.79	.583	.569	-11.564	15.501	12.173	68.917		
18	.0346	.0346	50.12	70.61	.595	.590	-10.772	15.814	12.414	81.428		
19	.0313	.0313	60.11	70.74	.605	.596	-10.577	16.379	12.755	93.511		
20	.0376	.0376	61.17	70.12	.615	.616	-10.223	16.632	12.961	105.535		
21	.0371	.0371	61.14	70.09	.625	.612	-9.963	16.699	13.360	141.640		
22	.0344	.0344	61.09	70.93	.634	.624	-9.517	16.770	13.463	141.606		
23	.0377	.0377	63.01	70.50	.642	.629	-9.515	17.054	13.667	154.176		
24	.0369	.0369	64.50	70.64	.649	.676	-9.532	17.254	13.814	167.111		
25	.0317	.0317	65.76	70.53	.656	.696	-9.596	17.489	13.963	178.041		
26	.0397	.0397	66.47	70.41	.665	.653	-8.914	17.671	13.963	190.794		
27	.0477	.0477	66.47	70.29	.669	.660	-8.804	17.781	14.126	203.546		
28	.0447	.0447	67.24	70.23	.677	.666	-8.598	17.998	14.335	214.112		
29	.0411	.0411	67.74	70.13	.682	.670	-8.464	18.121	14.576	226.864		
30	.0446	.0446	68.44	70.00	.689	.672	-8.277	18.315	14.647	239.617		
31	.0435	.0435	68.81	70.89	.692	.685	-8.178	18.457	14.784	271.316		
32	.0486	.0486	70.09	70.78	.705	.691	-7.837	18.748	14.784	292.650		
33	.0461	.0461	70.59	70.53	.715	.703	-7.568	19.017	15.020	333.984		
34	.0483	.0483	71.12	70.35	.726	.718	-7.293	19.262	15.350	367.869		
35	.0433	.0433	71.12	70.17	.737	.728	-6.986	19.599	15.593	398.293		
36	.0419	.0419	72.27	70.17	.745	.734	-6.791	19.794	15.705	431.449		
37	.0436	.0436	72.75	70.77	.756	.743	-6.491	20.095	15.889	461.508		
38	.0434	.0434	75.12	70.03	.766	.754	-6.228	20.357	16.136	494.664		
39	.0434	.0434	76.10	70.74	.771	.760	-6.093	20.492	16.252	525.634		
40	.0471	.0471	76.61	70.65	.781	.768	-5.923	20.762	16.439	525.634		
41	.0428	.0428	77.66	70.51	.786	.776	-5.646	20.919	16.607	558.062		
42	.0363	.0363	78.76	70.38	.812	.798	-5.000	21.055	17.069	652.429		
43	.0361	.0361	80.69	70.23	.830	.817	-4.522	21.165	17.477	746.068		
44	.0405	.0405	62.49	71.71	.651	.637	-3.052	22.633	17.910	841.164		
45	.0461	.0461	94.61	71.35	.656	.556	-2.441	23.144	18.306	936.260		
46	.0513	.0513	86.61	71.18	.871	.741	-2.068	23.617	18.698	1030.081		
47	.0565	.0565	88.29	70.77	.888	.74	-2.055	24.228	18.977	1125.750		
48	.0617	.0552	89.83	70.56	.904	.747	-2.055	24.507	19.320	1218.998		
49	.0691	.0597	91.52	72.29	.922	.903	-1.782	24.862	19.660	1313.730		
50	.0721	.0644	92.94	70.35	.935	.919	-1.733	24.862	19.898	1417.733		
51	.0772	.0696	94.33	69.85	.949	.930	-1.529	25.556	20.194	1502.465		
52	.0824	.0736	95.54	69.62	.961	.944	-1.329	25.556	20.194	1502.465		
53	.0873	.0782	96.65	69.88	.973	.953	-1.321	25.855	20.382	1596.468		
54	.0926	.0829	97.47	69.25	.981	.967	-1.314	26.171	20.684	1691.207		
55	.0985	.0875	98.21	68.10	.988	.966	-1.315	26.270	20.674	1786.206		
56	1.0022	.0922	98.76	68.04	.993	.986	-1.162	26.403	21.086	1886.481		
57	1.0036	.0966	99.57	68.05	.997	.990	-1.085	26.540	21.183	1974.127		
58	1.0135	.0914	99.29	68.73	.999	.994	-0.925	26.580	21.263	2068.852		
59	1.0127	.0963	99.36	68.73	1.000	1.008	-0.907	26.582	21.351	2163.766		
60	1.0139	.0977	99.27	68.69	1.000	1.001	-0.903	26.596	21.478	2256.867		
61	1.0159	.0953	99.42	68.71	1.000	1.009	-0.906	26.596	21.380	2356.501		
62	1.0134	.0999	99.42	68.72	1.000	1.009	-0.904	26.599	21.492	2447.415		
63	1.0139	.0946	99.45	68.72	1.000	1.001	-0.908	26.611	21.344	2635.421		
64	1.0149	.0922	99.48	68.74	1.000	1.001	-0.908	26.593	21.356	2730.153		
65	1.0149	.0938	99.42	68.73	1.000	1.008	-0.908	26.593	21.328	2825.067		
66	1.0155	.0905	99.50	68.75	1.000	1.001	-0.907	26.609	21.325	2920.163		
67	1.0160	.0931	99.84	68.75	1.000	1.001	-0.907	26.597	21.291	3013.984		
68	1.0165	.0977	99.83	68.78	1.000	1.000	-0.905	26.593	21.292	3108.716		
69	1.0176	.0954	99.41	68.78	1.000	1.000	-0.905	26.596	21.201	3897.540		
70	2.0139	1.910	99.43	68.73	1.000	1.000	-0.905	26.596	21.201	4686.729		
71	2.0172	2.207	99.40	68.62	1.000	1.000	-0.905	26.604	21.233	4686.729		
72	3.0063	2.084	99.70	68.59	1.000	1.000	-0.905	26.562	21.145	5076.29		

Table 16.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 3. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y^+=35$
FREE STREAM VELOCITY =	98.579	98.579
FREE STREAM TEMPERATURE =	69.040	
WALL TEMPERATURE =	88.500	
WALL HEAT FLUX =	.07848	
FREE STREAM DENSITY =	.07656	
FREE STREAM KINEMATIC VISCOSITY =	.0001594	
DENSITY OF FLUID AT WALL =	.07385	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001700	
WALL/FREE STREAM DENSITY RATIO =	.96450	
LOCATION REYNOLDS NUMBER (REX) =	1042257.25	
INPUT VALUE OF VELOCITY DELTA =	.38000	
INPUT VALUE OF TEMPERATURE DELTA =	.38000	
CALCULATED DELTA =		.28346
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.03973	.03962
MOMENTUM THICKNESS (THETA) =	.02650	.02688
ENERGY-DISSIPATION THICKNESS =	.04728	.04765
ENTHALPY THICKNESS =	.00144	.00145
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.49920	1.47388
SHAPE FACTOR 32 (ENERGY/THETA) =	1.78418	1.77255
MOMENTUM THICKNESS REYNOLDS NUMBER =	1365.21	1385.10
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	2046.73	2041.47
SKIN FRICTION COEFFICIENT =	.004092	
FRICTION VELOCITY =	4.54052	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.20209
CLAUSERS 'DELTA' INTEGRAL =	-.69385	-.82885
CLAUSERS 'G' INTEGRAL =	5.42495	5.18405
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.03512	.03818
MOMENTUM THICKNESS - CONSTANT DENSITY =	.02678	.02718
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.31159	1.40465

LOCATION -X- 20.23000

Z = CENTERLINE

Table 17.

JOB KLD46 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 3. GRID NO. 1

REDUCED PROFILE DATA

N	Y INCHES	Y/ FT/SEC	U DEG.F	T	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0063	.022	48.11	80.88	.488	.392	-11.115	10.596	7.613	14.091
2	.0078	.028	52.24	80.13	.530	.430	-10.205	11.506	8.579	17.430
3	.0087	.031	54.96	79.72	.558	.451	-9.606	12.104	9.003	19.433
4	.0097	.034	56.72	79.29	.575	.473	-9.218	12.836	9.448	21.659
5	.0107	.038	58.28	78.96	.591	.490	-8.878	12.893	9.781	23.885
6	.0121	.043	60.36	78.66	.612	.506	-8.418	13.523	10.093	27.001
7	.0135	.048	61.40	78.39	.623	.520	-8.187	13.656	10.367	30.118
8	.0143	.051	62.00	78.25	.629	.527	-8.055	13.990	10.512	31.899
9	.0165	.058	63.52	77.87	.644	.546	-7.721	14.252	10.900	36.796
10	.0187	.066	64.71	77.43	.656	.569	-7.459	14.512	11.349	41.693
11	.0207	.073	65.52	77.27	.665	.577	-7.280	14.431	11.512	46.145
12	.0221	.078	66.30	77.11	.673	.585	-7.108	14.603	11.674	49.261
13	.0236	.083	66.66	76.93	.676	.595	-7.025	14.686	11.668	52.600
14	.0257	.091	67.26	76.73	.682	.605	-6.894	14.817	12.066	57.275
15	.0273	.096	67.99	76.64	.690	.610	-6.736	14.974	12.163	60.837
16	.0295	.104	68.50	76.59	.695	.612	-6.625	15.086	12.213	65.734
17	.0311	.110	69.15	76.51	.701	.616	-6.462	15.228	12.291	69.295
18	.0375	.132	70.75	76.10	.718	.637	-6.129	15.581	12.718	83.542
19	.0445	.157	72.63	75.63	.737	.661	-5.715	15.996	13.695	99.124
20	.0515	.182	74.34	75.23	.754	.682	-5.338	16.373	13.608	114.706
21	.0575	.203	75.68	74.95	.768	.696	-5.043	16.668	13.889	128.062
22	.0644	.227	77.19	74.68	.783	.710	-4.710	17.001	14.173	143.421
23	.0716	.253	78.61	74.42	.797	.724	-4.397	17.314	14.437	159.449
24	.0775	.274	79.77	74.15	.809	.737	-4.142	17.569	14.715	172.582
25	.0843	.298	80.99	73.91	.822	.750	-3.874	17.637	14.961	187.719
26	.0917	.324	82.34	73.67	.835	.762	-3.576	18.135	15.210	204.191
27	.0979	.345	83.47	73.40	.847	.776	-3.327	18.383	15.483	217.992
28	.1046	.369	84.53	73.15	.858	.789	-3.093	18.618	15.739	232.907
29	.1117	.394	85.62	72.91	.869	.801	-2.854	18.857	15.988	248.711
30	.1177	.415	86.58	72.67	.878	.813	-2.642	19.069	16.231	262.067
31	.1247	.446	88.53	72.44	.888	.825	-2.433	19.278	16.467	277.649
32	.1314	.464	88.52	72.35	.898	.830	-2.215	19.496	16.558	292.563
33	.1483	.523	90.73	71.74	.920	.861	-1.729	19.982	17.165	310.183
34	.1661	.586	92.67	71.21	.940	.888	-1.302	20.409	17.724	369.806
35	.1837	.648	94.32	70.66	.957	.917	-0.939	20.772	18.288	408.983
36	.2016	.712	95.56	70.42	.970	.929	-0.660	21.051	18.540	449.274
37	.2185	.771	96.50	70.03	.979	.949	-0.458	21.253	18.943	486.448
38	.2368	.876	97.15	69.72	.985	.965	-0.316	21.508	19.258	527.184
39	.2533	.894	97.66	69.50	.991	.977	-0.203	21.508	19.286	564.358
40	.2715	.958	98.05	69.35	.995	.984	-0.117	21.594	19.633	604.426
41	.2885	1.018	98.25	69.24	.997	.989	-0.072	21.639	19.745	642.268
42	.3064	1.081	98.41	69.17	.998	.993	-0.037	21.674	19.817	682.114
43	.3361	1.186	98.50	69.08	1.000	.998	-0.017	21.694	19.916	748.226
44	.3667	1.294	98.59	69.04	1.000	1.000	-0.002	21.713	19.951	816.342
45	.3966	1.400	98.59	69.01	1.000	1.001	-0.004	21.714	19.982	883.344
46	.4265	1.515	98.58	69.07	1.000	1.000	-0.000	21.711	19.928	949.457
47	.4564	1.61C	98.56	69.04	1.000	1.000	-0.003	21.707	19.953	1016.014
48	.4869	1.718	98.60	69.03	1.000	1.001	-0.006	21.717	19.966	1083.907
49	.5167	1.623	98.62	69.04	1.000	1.000	-0.010	21.721	19.955	1150.242
50	.5465	1.928	98.58	69.05	1.000	1.000	-0.001	21.710	19.940	1216.577
51	.5763	2.033	98.51	69.04	1.000	1.000	-0.015	21.696	19.953	1282.912
52	.6067	2.140	98.47	69.01	1.000	1.001	-0.023	21.688	19.982	1350.582
53	.8245	2.909	98.50	69.03	1.000	1.000	-0.016	21.695	19.963	1835.405
54	1.0425	3.676	98.40	69.04	1.000	1.000	-0.040	21.671	19.951	2320.674
55	1.2607	4.448	98.43	69.06	1.000	1.000	-0.032	21.679	19.934	2806.387
56	1.4765	5.216	98.39	69.05	1.000	1.000	-0.041	21.670	19.945	3291.210
57	1.6971	5.987	98.30	69.07	1.000	1.000	-0.061	21.650	19.922	3777.815
58	1.9153	6.757	98.28	69.07	1.000	1.000	-0.065	21.646	19.922	4263.528
59	2.1333	7.526	98.21	69.08	1.000	1.000	-0.081	21.630	19.917	4748.797
60	2.3514	8.295	98.15	69.07	1.000	1.000	-0.094	21.617	19.923	5234.287
61	2.5695	9.065	98.14	69.07	1.000	1.000	-0.096	21.615	19.922	5719.779
62	2.7861	9.836	98.04	69.10	1.000	1.000	-0.119	21.592	19.888	6206.383
63	3.0065	10.607	98.10	69.10	1.000	1.000	-0.106	21.605	19.894	6692.541

Table 17.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 4. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y^+=35$
FREE STREAM VELOCITY =	98.669	98.669
FREE STREAM TEMPERATURE =	69.213	
WALL TEMPERATURE =	88.710	
WALL HEAT FLUX =	.07774	
FREE STREAM DENSITY =	.07654	
FREE STREAM KINEMATIC VISCOSITY =	.0001595	
DENSITY OF FLUID AT WALL =	.07382	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001701	
WALL/FREE STREAM DENSITY RATIO =	.96445	
LOCATION REYNOLDS NUMBER (REX) =	1042609.78	
INPUT VALUE OF VELOCITY DELTA =	.38000	
INPUT VALUE OF TEMPERATURE DELTA =	.41000	
CALCULATED DELTA =		.30691
DISPLACEMENT THICKNESS (DELSTAR) =	.00000	.04376
MOMENTUM THICKNESS (THETA) =	.02918	.02969
ENERGY-DISSIPATION THICKNESS =	.05197	.05252
ENTHALPY THICKNESS =	.00153	.00154
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.51034	1.47391
SHAPE FACTOR 32 (ENERGY/THETA) =	1.78130	1.76873
MOMENTUM THICKNESS REYNOLDS NUMBER =	1503.68	1530.32
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	2271.08	2255.55
SKIN FRICTION COEFFICIENT =	.003946	
FRICTION VELOCITY =	4.46288	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.25291
CLAUSERS 'DELTA' INTEGRAL =	-7.77189	-.93355
CLAUSERS 'G' INTEGRAL =	6.38686	5.97025
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.03873	.04223
MOMENTUM THICKNESS - CONSTANT DENSITY =	.02948	.03001
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.31385	1.40698

LOCATION -X- 20.23000
Z = +6 INCHES

Table 18.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79
 RUN NO. 8. POINT 4. GRID NO. 1

REDUCED PROFILE DATA

N	Y INCHES	Y/	U	T	U-UE	U(+)	T(+)	Y(+)
	INCHES	DELTA	FT/SEC	DEG.F	U/UE	THETA	UTAU	
1	.0076	.025	50.76	80.54	.514	.419	-10.734	11.375
2	.0090	.029	53.58	79.90	.543	.452	-10.162	12.007
3	.0298	.032	55.24	79.60	.560	.467	-9.732	12.377
4	.0107	.035	56.59	79.31	.574	.482	-9.428	12.681
5	.0119	.039	57.99	78.93	.588	.503	-9.115	13.374
6	.0135	.044	59.69	78.58	.605	.520	-8.734	13.583
7	.0148	.048	60.62	78.30	.614	.534	-8.526	10.586
8	.0157	.051	61.29	78.12	.621	.543	-8.376	10.772
9	.0178	.056	62.62	77.85	.635	.557	-8.077	14.031
10	.0218	.065	63.46	77.56	.643	.572	-7.885	14.224
11	.0216	.070	64.38	77.38	.652	.581	-7.684	14.425
12	.0234	.076	65.14	77.22	.660	.589	-7.513	14.596
13	.0228	.081	65.56	77.06	.665	.597	-7.415	14.694
14	.0268	.087	66.37	76.87	.673	.607	-7.238	14.871
15	.0287	.094	67.01	76.77	.679	.613	-7.093	15.015
16	.0307	.100	67.62	76.65	.685	.619	-6.957	15.152
17	.0325	.106	68.12	76.53	.690	.625	-6.846	15.263
18	.0391	.127	69.98	76.11	.709	.646	-6.429	15.680
19	.0457	.149	71.59	75.74	.726	.665	-6.068	16.041
20	.0526	.171	73.30	75.37	.743	.684	-5.685	16.424
21	.0587	.191	74.49	75.12	.755	.697	-5.417	16.692
22	.0657	.214	75.94	74.87	.770	.710	-5.092	17.017
23	.0727	.237	77.24	74.61	.783	.723	-4.802	17.307
24	.0787	.257	78.36	74.38	.794	.735	-4.547	17.562
25	.0560	.280	79.67	74.12	.807	.748	-4.257	17.852
26	.0927	.302	80.67	73.89	.818	.760	-4.034	18.075
27	.0698	.322	81.77	73.72	.829	.769	-3.787	18.322
28	.1062	.346	82.93	73.53	.840	.779	-3.527	18.582
29	.1127	.367	83.86	73.26	.850	.793	-3.318	18.791
30	.1187	.387	84.93	73.03	.861	.804	-3.078	19.031
31	.1260	.411	85.83	72.81	.870	.815	-2.877	19.232
32	.1329	.433	86.67	72.62	.878	.825	-2.689	19.420
33	.1499	.489	89.11	72.18	.903	.848	-2.142	19.967
34	.1675	.546	91.11	71.73	.923	.871	-1.694	20.415
35	.1847	.602	92.97	71.30	.942	.893	-1.278	20.831
36	.2027	.661	94.42	70.84	.957	.916	-0.952	21.157
37	.2198	.716	95.59	70.54	.969	.932	-0.690	21.419
38	.2377	.775	96.61	70.20	.979	.950	-0.463	21.646
39	.2549	.631	97.30	69.91	.986	.964	-0.307	21.802
40	.2727	.889	97.75	69.72	.991	.974	-0.207	21.902
41	.2897	.944	98.18	69.59	.995	.981	-0.109	22.000
42	.3077	1.003	98.52	69.49	.997	.986	-0.055	22.053
43	.3375	1.100	98.58	69.35	.999	.993	-0.019	22.090
44	.3676	1.198	98.63	69.28	1.000	.997	-0.008	22.101
45	.3977	1.296	98.65	69.24	1.000	.999	-0.004	22.105
46	.4277	1.394	98.69	69.21	1.000	1.000	-0.005	22.114
47	.4577	1.491	98.66	69.20	1.000	1.001	-0.001	22.108
48	.4877	1.589	98.68	69.22	1.000	.999	-0.003	22.112
49	.5178	1.687	98.71	69.24	1.000	.999	-0.000	22.116
50	.5478	1.785	98.67	69.25	1.000	.998	-0.003	22.109
51	.5778	1.883	98.68	69.24	1.000	.999	-0.000	22.112
52	.6079	1.981	98.63	69.25	1.000	.998	-0.008	22.101
53	.6325	2.690	98.68	69.23	1.000	.999	-0.003	22.112
54	1.06438	3.401	98.72	69.23	1.000	.999	-0.003	22.112
55	1.2618	4.111	98.72	69.18	1.000	.999	-0.002	22.121
56	1.4796	4.621	98.70	69.16	1.000	1.000	-0.002	22.119
57	1.6984	5.534	98.75	69.14	1.000	1.001	-0.004	22.127
58	1.9166	6.245	98.65	69.13	1.000	1.000	-0.004	22.105
59	2.1346	6.955	98.69	69.13	1.000	1.000	-0.004	22.113
60	2.3530	7.667	98.57	69.10	.999	1.006	-0.022	22.087
61	2.5709	8.377	98.55	69.13	.999	1.004	-0.027	22.082
62	2.7895	9.089	98.55	69.08	.999	1.007	-0.026	22.083
63	3.0080	9.601	98.46	69.04	.998	1.009	-0.046	22.062
							20.009	6576.936

Table 18.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 5. GRID NO. 1

BOUNDARY LAYER PROPERTIES

LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
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FREE STREAM VELOCITY =	98.803
FREE STREAM TEMPERATURE =	69.372
WALL TEMPERATURE =	88.840
WALL HEAT FLUX =	.07878
FREE STREAM DENSITY =	.07652
FREE STREAM KINEMATIC VISCOSITY =	.0001596
DENSITY OF FLUID AT WALL =	.07380
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001702
WALL/FREE STREAM DENSITY RATIO =	.96451
LOCATION REYNOLDS NUMBER (REX) =	1043460.77
INPUT VALUE OF VELOCITY DELTA =	.38000
INPUT VALUE OF TEMPERATURE DELTA =	.38000
CALCULATED DELTA =	.28313
DELTA 99.5% INPUT =	.00000
DISPLACEMENT THICKNESS (DELSTAR) =	.03925
MOMENTUM THICKNESS (THETA) =	.02617
ENERGY-DISSIPATION THICKNESS =	.04673
ENTHALPY THICKNESS =	.00145
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.49998
SHAPE FACTOR 32 (ENERGY/THETA) =	1.78570
MOMENTUM THICKNESS REYNOLDS NUMBER =	1349.79
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	2024.65
SKIN FRICTION COEFFICIENT =	.004123
FRICTION VELOCITY =	4.56772
LAW OF THE WALL CONSTANT (K) =	.41000
LAW OF THE WALL CONSTANT (C) =	5.00000
WAKE STRENGTH =	.18378
CLAUSERS 'DELTA' INTEGRAL =	-.68077
CLAUSERS 'G' INTEGRAL =	5.31071
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.03464
MOMENTUM THICKNESS - CONSTANT DENSITY =	.02645
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.30945

LOCATION -X- 20.23000

Z = -6 INCHES

Table 19.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 5. GRID NO. 1

REDUCED PROFILE DATA

N	INCHES	Y	Y/ INCHES	U	T	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0063	.C22	48.52	81.35	.491	.385	-11.009	10.622	7.689	14.159	
2	.0073	.C26	51.73	80.97	.524	.404	-10.305	11.326	8.078	16.396	
3	.0084	.C30	54.69	80.37	.554	.435	-9.656	11.973	8.701	18.857	
4	.0093	.C33	56.67	80.03	.574	.452	-9.223	12.407	9.043	20.870	
5	.0104	.C37	58.20	79.78	.589	.466	-8.889	12.742	9.308	23.331	
6	.0121	.C43	60.25	79.27	.610	.492	-8.441	13.190	9.829	27.133	
7	.0139	.C49	61.73	78.96	.625	.507	-8.117	13.514	10.146	31.160	
8	.0146	.C52	62.39	78.78	.631	.517	-7.971	13.659	10.327	32.726	
9	.0166	.C59	63.48	78.43	.642	.535	-7.733	13.897	10.690	37.199	
10	.0186	.C66	64.53	78.14	.653	.549	-7.504	14.127	10.983	41.673	
11	.0209	.C74	65.49	77.88	.663	.563	-7.293	14.238	11.258	46.818	
12	.0222	.C79	66.17	77.71	.670	.571	-7.144	14.487	11.425	49.726	
13	.0236	.C83	66.83	77.62	.676	.577	-7.000	14.630	11.527	52.858	
14	.0260	.C92	67.56	77.48	.684	.584	-6.839	14.791	11.668	58.226	
15	.0277	.C98	68.14	77.26	.690	.595	-6.712	14.918	11.889	62.029	
16	.0294	.104	68.68	77.08	.695	.604	-6.594	15.037	12.072	65.832	
17	.0312	.110	69.24	76.95	.701	.611	-6.472	15.158	12.214	69.858	
18	.0374	.132	71.07	76.57	.719	.630	-6.071	15.560	12.598	83.727	
19	.0444	.157	72.59	76.15	.739	.652	-5.651	15.979	13.028	99.385	
20	.0516	.182	74.45	75.75	.758	.673	-5.244	16.387	13.446	115.490	
21	.0576	.204	76.16	75.41	.771	.690	-4.957	16.674	13.787	128.912	
22	.0644	.228	77.56	75.11	.785	.705	-4.646	16.985	14.105	144.123	
23	.0716	.253	79.19	74.81	.801	.721	-4.294	17.336	14.408	160.228	
24	.0774	.273	80.29	74.51	.813	.736	-4.053	17.577	14.720	173.202	
25	.0844	.298	81.75	74.21	.827	.751	-3.733	17.897	15.022	188.860	
26	.0915	.323	82.94	74.06	.839	.759	-3.473	18.158	15.176	204.742	
27	.0975	.344	83.90	73.85	.849	.770	-3.262	18.369	15.398	218.164	
28	.1043	.366	85.12	73.50	.861	.788	-2.997	18.634	15.756	233.374	
29	.1114	.394	86.32	73.28	.874	.799	-2.733	18.897	15.981	249.256	
30	.1176	.415	87.16	73.12	.882	.808	-2.550	19.081	16.147	263.125	
31	.1244	.439	88.26	72.81	.893	.824	-2.308	19.323	16.467	278.336	
32	.1314	.464	89.16	72.48	.902	.840	-2.111	19.520	16.802	293.994	
33	.1485	.525	91.25	71.99	.924	.865	-1.653	19.978	17.302	332.245	
34	.1662	.587	93.19	71.47	.943	.892	-1.229	20.402	17.842	371.838	
35	.1836	.649	94.62	71.07	.958	.913	-0.917	20.714	18.252	410.759	
36	.2014	.711	95.79	70.70	.970	.932	-0.656	20.972	18.632	450.576	
37	.2186	.772	96.75	70.38	.979	.948	-0.450	21.181	18.959	489.050	
38	.2363	.835	97.31	70.03	.985	.966	-0.326	21.304	19.321	528.643	
39	.2533	.895	97.89	69.75	.991	.981	-0.200	21.431	19.608	566.670	
40	.2714	.959	98.27	69.64	.995	.986	-0.117	21.513	19.713	607.158	
41	.2864	1.019	98.40	69.56	.996	.990	-0.088	21.543	19.800	645.185	
42	.3067	1.083	98.58	69.52	.998	.992	-0.049	21.581	19.839	686.120	
43	.3362	1.188	98.68	69.44	.999	.996	-0.026	21.605	19.921	752.108	
44	.3666	1.295	98.75	69.37	.999	1.000	-0.012	21.618	19.993	820.110	
45	.3964	1.400	98.79	69.38	1.000	1.000	-0.002	21.629	19.986	886.769	
46	.4267	1.507	98.83	69.37	1.000	1.000	-0.005	21.636	19.998	954.546	
47	.4567	1.613	98.79	69.37	1.000	1.000	-0.003	21.627	19.994	1021.653	
48	.4866	1.719	98.70	69.40	.999	.999	-0.021	21.609	19.968	1088.536	
49	.5164	1.824	98.76	69.38	1.000	.999	-0.009	21.622	19.982	1155.195	
50	.5465	1.930	98.83	69.37	1.000	1.000	-0.005	21.636	19.995	1222.525	
51	.5769	2.038	98.78	69.39	1.000	.999	-0.005	21.625	19.974	1290.527	
52	.6067	2.143	98.74	69.38	1.000	1.000	-0.014	21.616	19.986	1357.186	
53	.8244	2.912	98.80	69.41	1.000	.998	-0.001	21.630	19.951	1844.156	
54	.0424	3.682	98.81	69.40	1.000	.999	-0.001	21.632	19.969	2331.797	
55	.2607	4.453	98.72	69.38	1.000	.999	-0.016	21.613	19.980	2820.110	
56	.4763	5.221	98.78	69.39	1.000	.999	-0.006	21.625	19.974	3306.856	
57	.6972	5.995	98.76	69.43	1.000	.997	-0.009	21.621	19.933	3796.510	
58	.9154	6.765	98.64	69.49	.998	.994	-0.036	21.594	19.871	4284.599	
59	.21334	7.535	98.62	69.43	.998	.997	-0.040	21.590	19.934	4772.240	
60	.23515	8.305	98.56	69.44	.998	.996	-0.053	21.578	19.922	5260.105	
61	.25696	9.076	98.43	69.44	.996	.996	-0.082	21.549	19.922	5747.970	
62	.27682	9.648	98.36	69.45	.996	.996	-0.096	21.535	19.917	6236.953	
63	3.0066	10.619	98.35	69.40	.995	.999	-0.099	21.531	19.969	6725.489	

Table 19.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 7. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	SUBLAYER FUNCTION FROM WALL TO $Y^+=35$	STANDARD
FREE STREAM VELOCITY	98.850	98.850	
FREE STREAM TEMPERATURE	69.539		
WALL TEMPERATURE	90.360		
WALL HEAT FLUX	.07816		
FREE STREAM DENSITY	.07649		
FREE STREAM KINEMATIC VISCOSITY	.0001597		
DENSITY OF FLUID AT WALL	.07360		
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001710		
WALL/FREE STREAM DENSITY RATIO	.96215		
LOCATION REYNOLDS NUMBER (REX)	1457019.69		
INPUT VALUE OF VELOCITY DELTA	.50000		
INPUT VALUE OF TEMPERATURE DELTA	.50000		
CALCULATED DELTA		.43856	
DELTA 99.5% INPUT	.00000		
DISPLACEMENT THICKNESS (DELSTAR)	.06620	.06600	
MOMENTUM THICKNESS (THETA)	.04476	.04521	
ENERGY-DISSIPATION THICKNESS	.07934	.07979	
ENTHALPY THICKNESS	.00209	.00211	
SHAPE FACTOR 12 (DELSTAR/THETA)	1.47895	1.45970	
SHAPE FACTOR 32 (ENERGY/THETA)	1.77261	1.76468	
MOMENTUM THICKNESS REYNOLDS NUMBER	2308.60	2331.95	
DISPLACEMENT THICKNESS REYNOLDS NUMBER	3414.30	3403.94	
SKIN FRICTION COEFFICIENT	.003434		
FRICTION VELOCITY	4.17588		
LAW OF THE WALL CONSTANT (K)	.41000		
LAW OF THE WALL CONSTANT (C)	5.00000		
WAKE STRENGTH		.43069	
CLAUSERS 'DELTA' INTEGRAL	-1.33449	-1.51240	
CLAUSEPS 'G' INTEGRAL	10.58810	10.20506	
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.06024	.06389	
MOMENTUM THICKNESS - CONSTANT DENSITY	.04521	.04568	
SHAPE FACTOR 12 - CONSTANT DENSITY	1.33246	1.39870	
LOCATION -X-	28.25000		
Z = +6 INCHES			

Table 20.

JOB KLD46 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 7. GRID NO. 1

REDUCED PROFILE DATA

N	Y/ INCHES	Y/ FT	U/ SEC	T/ DEG F	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0077	.118	46.46	81.60	.470	.421	-12.546	11.125	8.267	15.731
2	.0093	.21	49.83	80.84	.504	.457	-11.738	11.934	8.982	18.967
3	.0101	.23	51.42	80.55	.520	.471	-10.358	12.313	9.258	20.615
4	.0107	.24	52.46	80.38	.531	.480	-10.105	12.567	9.422	21.836
5	.0119	.27	53.85	80.09	.545	.493	-10.776	12.896	9.690	24.278
6	.0135	.31	55.66	79.72	.574	.511	-10.344	13.590	10.042	27.534
7	.0159	.35	56.75	79.37	.578	.528	-10.062	13.678	10.373	31.197
8	.0179	.36	57.12	79.26	.591	.533	-9.993	13.983	10.473	32.418
9	.0219	.41	58.39	78.86	.602	.552	-9.688	13.983	10.850	36.488
10	.0220	.46	59.50	78.60	.611	.565	-9.424	14.248	11.100	40.762
11	.02221	.50	60.40	78.40	.617	.574	-9.208	14.463	11.284	45.035
12	.02236	.54	61.01	78.23	.621	.583	-9.061	14.611	11.446	48.088
13	.02249	.57	61.39	78.08	.627	.599	-8.971	14.701	11.586	50.733
14	.02269	.61	62.01	77.86	.634	.608	-8.822	14.850	11.774	54.803
15	.02291	.66	62.64	77.70	.639	.615	-8.671	15.001	11.949	59.280
16	.03111	.71	63.18	77.56	.644	.619	-8.434	15.130	12.082	63.350
17	.03225	.74	63.63	77.48	.651	.634	-8.035	15.238	12.157	66.199
18	.03293	.90	65.30	77.16	.675	.652	-7.690	15.637	12.810	80.038
19	.04567	.104	66.74	76.79	.690	.672	-7.336	15.982	13.205	93.062
20	.05227	.120	68.21	76.37	.701	.683	-7.064	16.335	13.413	1C7.307
21	.05888	.134	69.27	76.15	.714	.692	-6.771	16.900	13.596	119.721
22	.06611	.151	70.57	75.95	.725	.707	-6.515	17.157	13.889	134.576
23	.07330	.167	71.64	75.64	.733	.714	-6.313	17.358	14.036	146.618
24	.07911	.180	72.49	75.49	.744	.726	-6.055	17.616	14.242	161.032
25	.08633	.197	73.56	75.27	.755	.734	-5.805	17.867	14.423	175.684
26	.09311	.212	74.61	75.08	.762	.745	-5.624	18.048	14.640	189.522
27	.09889	.226	75.37	74.85	.773	.747	-5.362	18.310	14.884	201.325
28	.10606	.242	76.46	74.80	.782	.757	-5.169	18.502	14.871	215.774
29	.11228	.257	77.26	74.60	.789	.763	-4.989	18.682	14.989	229.612
30	.11900	.271	78.01	74.48	.796	.771	-4.787	18.885	15.143	242.250
31	.12566	.287	78.86	74.31	.806	.778	-4.595	19.077	15.292	256.068
32	.13227	.303	79.66	74.16	.827	.796	-4.105	19.567	15.632	270.109
33	.14499	.342	81.71	73.80	.845	.814	-3.666	20.006	15.997	305.112
34	.16775	.382	83.54	73.41	.863	.833	-3.254	20.418	16.376	340.928
35	.18447	.421	85.26	73.01	.881	.850	-2.821	20.850	16.700	375.931
36	.20333	.464	87.07	72.66	.894	.863	-2.503	21.168	16.956	413.782
37	.21990	.501	88.40	72.39	.910	.883	-2.130	21.542	17.341	447.564
38	.23779	.543	89.96	71.98	.923	.899	-1.824	22.1847	17.660	484.194
39	.25447	.581	91.23	71.65	.937	.909	-1.494	22.2177	17.857	518.383
40	.27229	.622	92.61	71.44	.948	.921	-1.241	22.430	18.100	555.420
41	.29022	.662	93.67	71.18	.958	.935	-1.002	22.670	18.380	590.626
42	.30611	.703	94.67	70.88	.972	.954	-0.661	23.011	18.753	627.054
43	.33776	.776	96.09	70.49	.984	.970	-0.365	23.286	19.055	687.087
44	.36776	.839	97.24	70.17	.992	.982	-0.168	23.484	19.299	748.748
45	.39779	.907	98.07	69.91	.996	.999	-0.095	23.577	19.416	809.799
46	.42779	.976	98.45	69.79	1.000	.999	-0.047	23.625	19.577	870.850
47	.45778	1.044	98.66	69.62	1.000	.996	-0.047	23.660	19.624	931.697
48	.48883	1.113	98.80	69.57	1.000	.999	-0.012	23.681	19.629	993.766
49	.51779	1.181	98.89	69.56	1.000	1.000	-0.009	23.666	19.650	1054.003
50	.54777	1.249	98.83	69.54	1.000	1.000	-0.004	23.667	19.656	1114.646
51	.57800	1.318	98.83	69.52	1.000	1.000	-0.005	23.665	19.582	1236.748
52	.60777	1.386	98.89	69.51	1.000	1.002	-0.009	23.681	19.680	1680.588
53	.62558	1.453	98.82	69.51	1.000	1.000	-0.005	23.665	19.582	2125.242
54	1.0443	2.381	98.88	69.58	1.000	1.000	-0.006	23.678	19.610	2568.471
55	1.26221	2.378	98.84	69.54	1.000	1.000	-0.002	23.669	19.647	3011.701
56	1.47599	3.375	98.93	69.53	1.000	1.001	0.016	23.690	19.660	3456.558
57	1.69853	3.873	98.89	69.50	1.000	1.000	0.009	23.680	19.594	3900.601
58	1.91677	4.370	98.90	69.53	1.000	1.000	0.012	23.683	19.653	4344.441
59	2.13482	4.866	98.87	69.50	1.000	1.002	0.004	23.676	19.684	4787.874
60	2.35277	5.365	98.80	69.49	1.000	1.003	-0.012	23.660	19.699	5231.917
61	2.25709	5.862	98.77	69.48	1.000	1.003	-0.019	23.653	19.704	5676.775
62	2.27895	6.361	98.70	69.47	1.000	1.003	-0.036	23.636	19.710	6121.428
63	3.0080	6.859	98.67	69.46	1.000	1.004	-0.044	23.627	19.721	

Table 20.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 9. GRID NO. 1

BOUNDARY LAYER PROPERTIES

LINEAR INTERPOLATION	STANDARD SUBLAYER FUNCTION FROM TO WALL
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FREE STREAM VELOCITY =	98.791	98.791
FREE STREAM TEMPERATURE =	69.330	
WALL TEMPERATURE =	91.450	
WALL HEAT FLUX =	.07785	
FREE STREAM DENSITY =	.07652	
FREE STREAM KINEMATIC VISCOSITY =	.0001596	
DENSITY OF FLUID AT WALL =	.07345	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001716	
WALL/FREE STREAM DENSITY RATIO =	.95986	
LOCATION REYNOLDS NUMBER (REX) =	1867237.73	
INPUT VALUE OF VELOCITY DELTA =	.60000	
INPUT VALUE OF TEMPERATURE DELTA =	.69000	
CALCULATED DELTA =		.52824
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.07941	.07936
MOMENTUM THICKNESS (THETA) =	.05419	.05452
ENERGY-DISSIPATION THICKNESS =	.09599	.09627
ENTHALPY THICKNESS =	.00274	.00275
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.46538	1.45582
SHAPE FACTOR 32 (ENERGY/THETA) =	1.77135	1.76588
MOMENTUM THICKNESS REYNOLDS NUMBER =	2795.22	2811.98
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	4096.05	4093.73
SKIN FRICTION COEFFICIENT =	.003268	
FRICTION VELOCITY =	4.07592	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.46756
CLAUSERS 'DELTA' INTEGRAL =	-1.69290	-1.85714
CLAUSERS 'G' INTEGRAL =	12.86577	12.63537
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.07326	.07662
MOMENTUM THICKNESS - CONSTANT DENSITY =	.05478	.05511
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.33748	1.39025

LOCATION -X- 36.20000

Z = CENTERLINE

Table 21.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 9. GRID NO. 1

REDUCED PROFILE DATA

	Y INCHES	Y/ DELT A	U FT/SEC	T DEG.F	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0068	.013	42.95	83.39	.435	.364	-13.699	10.538	7.440	13.519
2	.0076	.015	44.68	82.80	.452	.391	-13.275	10.963	7.981	15.499
3	.0094	.018	48.37	81.89	.490	.432	-12.372	11.866	8.823	18.666
4	.0099	.019	49.16	81.68	.498	.442	-12.170	12.067	9.020	19.655
5	.0108	.021	50.58	81.34	.512	.457	-11.827	12.410	9.329	21.437
6	.0126	.024	53.05	80.85	.537	.479	-11.223	13.015	9.786	25.000
7	.0142	.027	54.43	80.44	.551	.498	-10.864	13.354	10.163	28.167
8	.0151	.029	55.21	80.20	.559	.509	-10.693	13.545	10.385	29.948
9	.0169	.032	56.32	79.97	.570	.519	-10.419	13.819	10.593	33.511
10	.0192	.036	57.44	79.53	.581	.539	-10.145	14.092	10.999	38.064
11	.02209	.040	58.23	79.42	.589	.544	-9.950	14.287	11.104	41.429
12	.02226	.043	58.88	79.21	.596	.553	-9.791	14.447	11.295	44.794
13	.02242	.046	59.27	78.93	.600	.566	-9.695	14.543	11.553	47.961
14	.02260	.049	60.12	78.84	.609	.570	-9.467	14.751	11.642	51.523
15	.02284	.054	60.67	78.59	.614	.581	-9.354	14.884	11.866	56.274
16	.0302	.057	61.18	78.44	.619	.588	-9.227	15.010	12.008	59.837
17	.0316	.060	61.60	78.34	.624	.593	-9.124	15.113	12.099	62.608
18	.0381	.072	63.36	78.01	.641	.607	-8.694	15.544	12.401	75.474
19	.0448	.085	64.81	77.53	.656	.629	-8.337	15.900	12.843	88.736
20	.05200	.098	66.11	77.12	.669	.648	-8.019	16.219	13.223	102.988
21	.05580	.110	67.37	76.98	.682	.654	-7.710	16.528	13.351	114.864
22	.06500	.123	68.45	76.73	.693	.665	-7.443	16.795	13.583	128.720
23	.0721	.137	69.60	76.44	.705	.678	-7.162	17.076	13.861	142.773
24	.0781	.148	70.49	76.27	.714	.686	-6.943	17.295	14.007	154.650
25	.0850	.161	71.38	76.06	.723	.696	-6.725	17.512	14.205	168.307
26	.0918	.174	72.32	75.78	.732	.709	-6.494	17.744	14.466	181.767
27	.0979	.185	73.18	75.57	.741	.718	-6.284	17.954	14.655	193.841
28	.1048	.198	73.83	75.48	.747	.722	-6.124	18.114	14.742	207.499
29	.1118	.212	74.64	75.28	.756	.731	-5.925	18.312	14.925	221.355
30	.1160	.223	75.40	75.07	.763	.740	-5.738	18.500	15.116	233.627
31	.1248	.236	76.15	74.92	.771	.747	-5.556	18.682	15.255	247.087
32	.1320	.250	76.96	74.75	.779	.755	-5.356	18.882	15.416	261.338
33	.1490	.262	78.58	74.45	.795	.769	-4.960	19.278	15.693	294.988
34	.1666	.315	80.45	74.03	.814	.787	-4.499	19.738	16.073	329.825
35	.1840	.348	81.94	73.71	.829	.802	-4.134	20.103	16.374	364.267
36	.2022	.383	83.44	73.35	.845	.818	-3.767	20.470	16.702	400.291
37	.2190	.415	84.85	73.07	.859	.831	-3.420	20.818	16.960	433.545
38	.2370	.449	86.25	72.79	.873	.844	-3.077	21.160	17.221	469.174
39	.2544	.482	87.64	72.51	.887	.856	-2.737	21.501	17.482	503.615
40	.2720	.515	88.90	72.21	.900	.870	-2.427	21.810	17.753	558.453
41	.2894	.548	89.89	71.87	.910	.885	-2.185	22.053	18.068	572.894
42	.3072	.582	91.06	71.71	.922	.893	-1.896	22.342	18.222	608.127
43	.3418	.647	93.14	71.21	.943	.915	-1.386	22.852	18.682	676.614
44	.3769	.714	94.83	70.76	.960	.935	-0.971	23.266	19.096	746.090
45	.4124	.781	96.34	70.39	.975	.952	-0.600	23.637	19.441	816.359
46	.4468	.846	97.28	70.07	.985	.967	-0.371	23.866	19.734	884.450
47	.4820	.913	97.95	69.75	.991	.981	-0.207	24.031	20.026	954.124
48	.5171	.979	98.44	69.59	.996	.988	-0.086	24.151	20.177	1023.600
49	.5520	1.045	98.67	69.49	.999	.993	-0.031	24.207	20.271	1092.681
50	.5870	1.111	98.74	69.41	.999	.996	-0.014	24.224	20.340	1161.960
51	.6222	1.178	98.75	69.38	1.000	.998	-0.010	24.228	20.373	1231.634
52	.6571	1.244	98.85	69.36	1.001	.999	-0.014	24.554	20.387	1300.715
53	.6918	1.310	98.78	69.35	1.001	.999	-0.014	24.552	20.432	1400.577
54	.7269	1.376	98.85	69.31	1.001	1.000	-0.021	24.551	20.415	1438.876
55	.7620	1.443	98.88	69.33	1.001	1.000	-0.021	24.550	20.405	1508.352
56	.7968	1.508	98.80	69.34	1.000	1.000	-0.021	24.549	20.395	1577.235
57	.8320	1.575	98.84	69.35	1.001	1.000	-0.021	24.548	20.390	1646.909
58	.8668	1.641	98.84	69.36	1.000	1.000	-0.021	24.547	20.392	1715.792
59	.9018	1.707	98.84	69.35	1.001	1.000	-0.013	24.546	20.401	1785.071
60	.9375	1.775	98.81	69.35	1.000	1.000	-0.006	24.545	20.396	1855.735
61	.9719	1.840	98.80	69.36	1.000	1.000	-0.002	24.544	20.380	1923.826
62	1.0068	1.906	98.81	69.37	1.000	1.000	-0.004	24.543	20.380	1992.906
63	1.3067	2.474	98.72	69.36	.999	.999	-0.017	24.542	20.401	2086.524
64	1.6066	3.041	98.69	69.35	.999	.999	-0.026	24.541	20.355	2180.143
65	1.9066	3.609	98.68	69.40	.999	.997	-0.027	24.540	20.355	2173.059
66	2.2068	4.178	98.56	69.39	.998	.997	-0.057	24.539	20.360	24368.171
67	2.5072	4.746	98.54	69.37	.997	.998	-0.061	24.538	20.375	4962.776
68	2.8068	5.314	98.46	69.38	.997	.998	-0.082	24.537	20.365	5555.803
69	3.1071	5.882	98.46	69.36	.997	.999	-0.077	24.536	20.383	6150.213
70	3.4066	6.449	98.38	69.42	.996	.996	-0.101	24.535	20.334	6743.039
71	3.7068	7.017	98.44	69.43	.996	.995	-0.087	24.534	20.325	7337.251
72	4.0074	7.586	98.49	69.40	.997	.997	-0.073	24.533	20.355	7932.255

Table 21.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79
 RUN NO. 8. POINT 10. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y+ = 35$
FREE STREAM VELOCITY =	98.962	98.962
FREE STREAM TEMPERATURE =	69.539	
WALL TEMPERATURE =	92.960	
WALL HEAT FLUX =	.07784	
FREE STREAM DENSITY =	.07602	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001607	
DENSITY OF FLUID AT WALL =	.07279	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001735	
WALL/FREE STREAM DENSITY RATIO =	.95762	
LOCATION REYNOLDS NUMBER (REX) =	2269045.59	
INPUT VALUE OF VELOCITY DELTA =	.77000	
INPUT VALUE OF TEMPERATURE DELTA =	.81000	
CALCULATED DELTA =		.34971
DISPLACEMENT THICKNESS (DELSTAR) =	.00000	
MOMENTUM THICKNESS (THETA) =	.09585	595
ENERGY-DISSIPATION THICKNESS =	.06631	.5651
ENTHALPY THICKNESS =	.11758	.771
SHAPE FACTOR 12 (DELSTAR/THETA) =	.00339	.0340
SHAPE FACTOR 32 (ENERGY/THETA) =	1.44553	1.44268
MOMENTUM THICKNESS REYNOLDS NUMBER =	1.77328	1.76976
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	3402.33	3412.88
SKIN FRICTION COEFFICIENT =	4918.17	4923.70
FRICTION VELOCITY =	.003137	
LAW OF THE WALL CONSTANT (K) =	4.00520	
LAW OF THE WALL CONSTANT (C) =	.41000	
WAKE STRENGTH =	5.00000	.47483
CLAUSERS 'DELTA' INTEGRAL =	-2.14283	-2.28698
CLAUSERS 'G' INTEGRAL =	15.52449	15.45673
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.08959	.09256
MOMENTUM THICKNESS - CONSTANT DENSITY =	.06703	.06724
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.33665	1.37653
LOCATION -X- =	44.22000	
Z = CENTERLINE		

Table 22.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 30. GRID NO. 1

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.009	37.16	85.56	.376	.316	-15.426	9.283	6.648	11.022	
2	.007	40.72	84.81	.410	.348	-14.542	10.167	7.330	12.946	
3	.007	43.63	84.05	.412	.380	-13.816	10.892	8.007	14.870	
4	.009	47.52	83.01	.414	.425	-12.844	11.864	8.940	17.947	
5	.010	48.94	82.69	.415	.439	-12.490	12.218	9.236	19.294	
6	.0116	51.19	82.06	.517	.466	-11.927	12.781	9.802	22.372	
7	.0129	52.55	81.59	.531	.485	-11.587	13.121	10.217	24.873	
8	.0143	53.8C	81.19	.544	.503	-11.275	13.433	10.583	27.566	
9	.0161	55.5C4	80.83	.556	.518	-10.967	13.741	10.908	31.028	
10	.0178	55.90	80.47	.565	.533	-10.752	13.957	11.231	34.298	
11	.0198	56.63	80.10	.572	.549	-10.570	14.139	11.559	38.146	
12	.0215	57.41	79.98	.580	.554	-10.375	14.333	11.670	41.416	
13	.0229	58.05	79.78	.587	.563	-10.216	14.493	11.847	44.109	
14	.0251	58.91	79.55	.595	.573	-10.001	14.707	12.056	48.341	
15	.0271	59.25	79.46	.599	.576	-9.916	14.793	12.137	52.168	
16	.0289	59.93	79.35	.606	.581	-9.744	14.964	12.238	55.651	
17	.0306	60.36	79.19	.610	.588	-9.633	15.075	12.379	58.421	
18	.0371	61.89	78.61	.625	.613	-9.255	15.453	12.898	71.424	
19	.0441	63.36	78.20	.640	.630	-8.889	15.820	13.267	84.890	
20	.0507	64.77	77.82	.654	.646	-8.538	16.171	13.607	97.986	
21	.0568	65.80	77.62	.665	.655	-8.280	16.428	13.791	109.320	
22	.0639	66.93	77.31	.676	.668	-7.996	16.712	14.069	122.978	
23	.0711	67.94	77.07	.687	.678	-7.745	16.964	14.280	136.828	
24	.0768	68.77	76.95	.695	.684	-7.539	17.170	14.396	147.792	
25	.0840	69.51	76.76	.702	.692	-7.353	17.355	14.566	161.642	
26	.0919	70.61	76.51	.713	.702	-7.080	17.628	14.785	174.916	
27	.0967	71.30	76.33	.721	.710	-6.905	17.803	14.951	186.073	
28	.1039	72.13	76.20	.729	.716	-6.699	18.009	15.065	199.923	
29	.1111	72.79	75.99	.736	.725	-6.534	18.174	15.258	213.773	
30	.1167	73.32	75.86	.741	.730	-6.451	18.307	15.375	224.545	
31	.1238	74.04	75.73	.748	.736	-6.222	18.487	15.485	238.203	
32	.1310	74.61	75.65	.756	.739	-6.030	18.678	15.562	252.053	
33	.1483	76.22	75.22	.770	.757	-5.677	19.031	15.945	285.332	
34	.1656	77.74	74.92	.786	.770	-5.298	19.411	16.213	318.611	
35	.1831	79.08	74.68	.799	.781	-4.965	19.743	16.435	352.274	
36	.2007	80.47	74.38	.813	.793	-4.617	20.091	16.700	386.130	
37	.2177	81.53	74.05	.824	.807	-4.353	20.356	16.996	410.832	
38	.2363	82.90	73.82	.838	.817	-4.011	20.697	17.206	454.611	
39	.2527	84.15	73.47	.850	.832	-3.698	21.011	17.524	486.159	
40	.2713	85.08	73.22	.860	.843	-3.465	21.243	17.747	521.938	
41	.2879	86.33	72.98	.872	.853	-3.154	21.555	17.962	553.870	
42	.3057	87.34	72.73	.883	.864	-2.902	21.806	18.186	588.111	
43	.3409	89.46	72.39	.894	.878	-2.373	22.335	18.494	655.823	
44	.3757	91.39	71.95	.923	.897	-1.890	22.818	18.886	722.765	
45	.4107	93.02	71.52	.940	.915	-1.484	23.225	19.272	790.092	
46	.4459	94.40	71.15	.954	.931	-1.139	23.569	19.609	857.804	
47	.4807	95.70	70.81	.967	.946	-8.14	23.894	19.914	924.746	
48	.5161	96.85	70.54	.979	.957	-5.527	24.181	20.151	992.842	
49	.5507	97.43	70.22	.985	.971	-3.82	24.326	20.438	1059.400	
50	.5863	98.01	70.02	.990	.979	-2.38	24.470	20.616	1127.881	
51	.6207	98.47	69.84	.995	.987	-1.24	24.585	20.783	1194.054	
52	.6560	98.69	69.76	.997	.991	-0.67	24.641	20.858	1261.958	
53	.6909	98.77	69.71	.998	.993	-0.48	24.660	20.902	1329.092	
54	.7259	98.83	69.58	.999	.998	-0.32	24.676	21.014	1396.819	
55	.7608	98.92	69.56	1.000	.999	-0.10	24.698	21.034	1463.554	
56	.7963	98.95	69.54	1.000	1.000	-0.02	24.706	21.056	1531.843	
57	.8309	98.98	69.54	1.000	1.000	-0.03	24.713	21.053	1665.343	
58	.8657	98.98	69.54	1.000	1.000	-0.05	24.752	21.072	1732.670	
59	.9007	98.93	69.52	1.000	1.001	-0.07	24.701	21.059	1799.997	
60	.9357	98.86	69.53	1.000	1.000	-0.10	24.688	21.059	1868.093	
61	.9711	98.91	69.56	1.000	1.000	-0.14	24.694	21.033	1935.420	
62	.0061	98.90	69.51	1.000	1.001	-0.16	24.692	21.080	2088.443	
63	1.3055	98.87	69.56	1.000	1.000	-0.22	24.686	21.036	2511.354	
64	1.6055	98.89	69.60	1.000	1.000	-0.17	24.691	21.001	3088.443	
65	1.9055	98.84	69.59	1.000	1.000	-0.31	24.677	21.006	3665.531	
66	2.2057	98.76	69.58	1.000	1.000	-0.51	24.658	21.021	4243.004	
67	2.5063	98.68	69.61	1.000	1.000	-0.71	24.637	20.991	4821.247	
68	2.8057	98.64	69.60	1.000	1.000	-0.79	24.629	21.001	5397.181	
69	3.1057	98.68	69.64	1.000	1.000	-0.71	24.637	20.966	5974.270	
70	3.4056	98.74	69.67	1.000	1.000	-0.55	24.654	20.941	6551.166	
71	3.7063	98.66	69.66	1.000	1.000	-0.70	24.638	20.946	7129.601	
72	4.0061	98.72	69.70	1.000	1.000	-0.61	24.648	20.905	7706.304	

Table 22.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 13. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y+ = 35$
FREE STREAM VELOCITY =	99.525	99.525
FREE STREAM TEMPERATURE =	70.160	
WALL TEMPERATURE =	93.590	
WALL HEAT FLUX =	.67784	
FREE STREAM DENSITY =	.07593	
FREE STREAM KINEMATIC VISCOSITY =	.0001611	
DENSITY OF FLUID AT WALL =	.07271	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001739	
WALL/FREE STREAM DENSITY RATIO =	.95765	
LOCATION REYNOLDS NUMBER (REX) =	2687161.94	
INPUT VALUE OF VELOCITY DELTA =	.89000	
INPUT VALUE OF TEMPERATURE DELTA =	.94000	
CALCULATED DELTA =		.76456
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.11381	.11397
MOMENTUM THICKNESS (THETA) =	.07917	.07930
ENERGY-DISSIPATION THICKNESS =	.14027	.14031
ENTHALPY THICKNESS =	.00393	.00393
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.43756	1.43722
SHAPE FACTOR 32 (ENERGY/THETA) =	1.77185	1.76951
MOMENTUM THICKNESS REYNOLDS NUMBER =	4076.92	4083.57
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	5860.80	5869.00
SKIN FRICTION COEFFICIENT =	.002988	
FRICITION VELOCITY =	3.93100	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.52880
CLAUSERS 'DELTA' INTEGRAL =	-2.65190	-2.78562
CLAUSERS 'G' INTEGRAL =	19.13555	19.15068
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.10731	.11003
MOMENTUM THICKNESS - CONSTANT DENSITY =	.08002	.08016
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.34100	1.37272
LOCATION -X- =	52.18001	
Z = CENTERLINE		

Table 23.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 13. GRID NO. 1

REDUCED PROFILE DATA

N	Y INCHES	Y/ FT/SEC	U DEG.F	T U/UE	THETA UTAU	U(+)	T(+)	Y(+)
1	.0051	.0051	35.03	87.05	.352	.279 -16.406	.8.912	5.764 9.666
2	.0071	.0071	36.97	85.89	.371	.329 -15.913	.9.405	6.784 13.550
3	.0084	.0084	40.36	85.02	.406	.366 -15.046	10.272	7.554 13.434
4	.0091	.0091	44.27	84.40	.445	.392 -14.056	11.262	8.314 15.884
5	.0110	.0110	45.76	84.16	.460	.403 -13.676	11.642	8.085 17.203
6	.0122	.0122	48.86	83.28	.491	.440 -12.890	12.428	9.413 20.763
7	.0131	.0131	50.49	82.91	.507	.456 -12.474	12.844	9.635 23.044
8	.0153	.0153	51.35	82.66	.516	.467 -12.254	13.064	9.740 24.740
9	.0200	.0200	53.07	82.16	.533	.488 -11.817	13.501	10.076 28.885
10	.0223	.0223	54.43	81.78	.547	.504 -11.473	13.845	10.405 32.653
11	.0249	.0249	55.10	81.42	.554	.519 -11.301	14.017	10.723 36.422
12	.0281	.0281	56.00	81.11	.563	.533 -11.072	14.246	10.998 39.625
13	.0294	.0294	56.43	80.96	.567	.539 -10.963	14.355	11.132 42.074
14	.0324	.0324	57.17	80.79	.574	.546 -10.774	14.544	11.283 46.031
15	.0355	.0355	57.84	80.59	.581	.555 -10.604	14.714	11.452 49.988
16	.0371	.0371	58.29	80.44	.586	.561 -10.490	14.828	11.593 53.003
17	.0399	.0399	58.89	80.25	.592	.569 -10.336	14.982	11.756 56.394
18	.0406	.0406	60.32	79.72	.606	.592 -9.974	15.344	12.220 69.207
19	.0437	.0437	61.91	79.37	.622	.607 -9.569	15.750	12.531 82.396
20	.0533	.0533	63.29	79.05	.636	.620 -9.219	16.100	12.812 94.832
21	.0563	.0563	64.20	78.75	.645	.634 -8.987	16.331	13.082 106.137
22	.0637	.0637	65.45	78.45	.656	.646 -8.667	16.651	13.339 120.080
23	.0704	.0704	66.51	78.28	.668	.654 -8.399	16.919	13.496 132.704
24	.0763	.0763	67.29	78.03	.676	.664 -8.201	17.118	13.716 143.821
25	.0835	.0835	68.11	77.79	.684	.674 -7.991	17.326	13.922 157.387
26	.0904	.0904	68.94	77.74	.693	.677 -7.780	17.538	13.972 170.388
27	.0963	.0963	69.77	77.57	.701	.684 -7.570	17.748	14.118 181.505
28	.1033	.1033	70.39	77.28	.707	.696 -7.411	17.967	14.375 194.694
29	.1107	.1107	71.09	77.11	.714	.703 -7.254	18.084	14.525 208.637
30	.1161	.1161	71.71	77.00	.720	.708 -7.077	18.242	14.624 218.812
31	.1232	.1232	72.33	76.85	.727	.714 -6.918	18.400	14.750 232.190
32	.1303	.1303	72.95	76.67	.733	.722 -6.760	18.559	14.910 245.568
33	.1471	.1471	74.32	76.28	.747	.739 -6.411	18.907	15.256 267.222
34	.1650	.1650	75.71	76.02	.761	.750 -6.057	19.261	15.488 291.0949
35	.1825	.1825	77.12	75.73	.775	.762 -5.699	19.619	15.742 343.923
36	.2003	.2003	78.43	75.32	.788	.780 -5.368	19.950	16.100 377.462
37	.2171	.2171	79.49	75.16	.799	.787 -5.097	20.221	16.243 409.116
38	.2351	.2351	80.75	74.91	.811	.797 -4.778	20.541	16.462 443.032
39	.2525	.2525	81.61	74.64	.820	.809 -4.556	20.762	16.704 475.817
40	.2703	.2703	82.87	74.42	.833	.818 -4.236	21.082	16.891 509.356
41	.2871	.2871	83.76	74.26	.842	.825 -4.011	21.307	17.035 541.010
42	.3052	.3052	84.81	74.00	.852	.836 -3.744	21.574	17.263 575.303
43	.3537	.3537	87.32	73.29	.877	.866 -3.105	22.214	17.890 666.498
44	.4012	.4012	89.76	72.82	.902	.887 -2.479	22.839	18.306 755.997
45	.4495	.4495	91.85	72.39	.923	.905 -1.952	23.366	18.685 847.004
46	.4973	.4973	93.79	71.99	.942	.922 -1.4556	23.860	19.040 937.069
47	.5453	.5453	95.49	71.61	.959	.938 -1.0262	24.292	19.368 1027.511
48	.5935	.5935	96.82	71.25	.973	.953 -6.688	24.630	19.687 1118.329
49	.6415	.6415	97.78	70.83	.983	.971 -4.433	24.875	20.057 1208.771
50	.6895	.6895	98.56	70.60	.990	.981 -2.47	25.071	20.263 1299.212
51	.7373	.7373	99.01	70.39	.995	.990 -1.32	25.186	20.444 1389.277
52	.7854	.7854	99.24	70.35	.997	.992 -0.72	25.247	20.478 1479.907
53	.8333	.8333	99.38	70.26	.999	.996 -0.37	25.281	20.561 1570.160
54	.8812	.8812	99.48	70.20	.999	.998 -0.22	25.322	20.615 1660.413
55	.9295	.9295	99.54	70.14	1.000	1.001 -0.04	25.317	20.666 1751.420
56	.9771	.9771	99.52	70.15	1.000	1.000 -0.01	25.316	20.656 1841.108
57	1.0253	1.0253	99.52	70.15	1.000	1.000 -0.02	25.307	20.659 1931.927
58	1.0731	1.0731	99.48	70.18	1.000	1.000 -0.01	25.312	20.632 2121.991
59	1.1215	1.1215	99.50	70.15	1.000	1.001 -0.06	25.299	20.664 2203.251
60	1.1693	1.1693	99.45	70.14	1.000	1.001 -0.19	25.292	20.637 2294.447
61	1.2177	1.2177	99.42	70.17	1.000	1.000 -0.26	25.305	20.660 2383.758
62	1.2651	1.2651	99.47	70.15	1.000	1.003 -0.12	25.306	20.630 2473.822
63	1.3129	1.3129	99.48	70.18	1.000	1.000 -0.24	25.297	20.622 2565.018
64	1.3613	1.3613	99.44	70.19	1.000	1.000 -0.13	25.305	20.651 2655.082
65	1.4091	1.4091	99.47	70.16	1.000	1.000 -0.27	25.291	20.650 2745.147
66	1.4569	1.4569	99.42	70.16	1.000	1.000 -0.11	25.307	20.635 2836.154
67	1.5052	1.5052	99.48	70.18	1.000	1.000 -0.27	25.291	20.650 3508.625
68	1.5621	1.5621	99.42	70.16	1.000	1.000 -0.51	25.267	20.616 4181.661
69	2.2193	2.2193	99.32	70.20	1.000	1.000 -0.69	25.249	20.606 4854.320
70	2.5763	2.5763	99.25	70.21	1.000	1.000 -0.45	25.273	20.597 5526.791
71	2.9332	2.9332	99.35	70.22	1.000	1.000 -0.45	25.248	20.606 6200.016
72	3.2905	3.2905	99.25	70.21	1.000	1.000 -0.70	25.238	20.611 6873.429
73	3.6479	3.6479	99.21	70.20	1.000	1.000 -0.80	25.221	20.601 7547.219
74	4.0055	4.0055	99.34	70.21	1.000	1.000 -0.47	25.271	20.601 7547.219

Table 23.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 14. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	SUBLAYER FUNCTION FROM WALL TO $Y^+ = 35$	STANDARD
FREE STREAM VELOCITY	= 99.429		99.429
FREE STREAM TEMPERATURE	= 70.635		
WALL TEMPERATURE	= 94.510		
WALL HEAT FLUX	= .07720		
FREE STREAM DENSITY	= .07586		
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001313		
WALL/FREE STREAM DENSITY RATIO	= .07259		
LOCATION REYNOLDS NUMBER (REX)	= .0001744		
INPUT VALUE OF VELOCITY DELTA	= .95692		
INPUT VALUE OF TEMPERATURE DELTA	= 3099954.62		
CALCULATED DELTA	= .94000		
DISPLACEMENT THICKNESS (DELSTAR)	= .99000		.88012
MOMENTUM THICKNESS (θ)	= .00000		
ENERGY-DISSIPATION THICKNESS	= .12815		
ENTHALPY THICKNESS	= .08944		
SHAPE FACTOR 12 (DELSTAR/ θ)	= .15874		
SHAPE FACTOR 32 (ENERGY/ θ)	= .00448		
MOMENTUM THICKNESS REYNOLDS NUMBER	= 1.43283		.00449
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 1.77483		1.42892
SKIN FRICTION COEFFICIENT	= 4594.11		1.77180
FRICTION VELOCITY	= 6582.58		4607.53
LAW OF THE WALL CONSTANT (K)	= .002936		6583.79
LAW OF THE WALL CONSTANT (C)	= 3.89448		
WAKE STRENGTH	= .41000		
CLAUSERS 'DELTA' INTEGRAL	= 5.00000		.50814
CLAUSERS 'G' INTEGRAL	= -2.98559		
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= 21.68469		-3.15784
MOMENTUM THICKNESS - CONSTANT DENSITY	= .12031		21.51733
SHAPE FACTOR 12 - CONSTANT DENSITY	= .09040		.12369
	= 1.33078		.09068
			1.36405
LOCATION -X-	60.35001		
Z = CENTERLINE			

Table 24.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 14. GRID NO. 1

REDUCED PROFILE DATA

N	Y INCHES	Y/	U	T	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0067	.008	39.25	86.43	.395	.338	-15.453	10.078	7.098	12.526
2	.0079	.009	42.25	85.45	.425	.379	-14.681	10.849	7.959	14.760
3	.0088	.010	44.50	65.05	.448	.396	-14.105	11.425	8.311	16.435
4	.0102	.012	46.93	84.45	.472	.421	-13.481	12.050	8.842	19.040
5	.0111	.013	48.38	84.07	.487	.437	-13.107	12.423	9.174	20.716
6	.0126	.014	50.22	83.61	.505	.457	-12.636	12.895	9.581	23.507
7	.0143	.016	51.67	83.24	.520	.472	-12.263	13.267	9.903	26.671
8	.0150	.017	52.27	83.04	.526	.480	-12.109	13.422	10.080	27.974
9	.0170	.019	53.37	82.62	.537	.498	-11.827	13.704	10.446	31.697
10	.0190	.022	54.70	82.29	.550	.512	-11.486	14.045	10.744	35.419
11	.0210	.024	55.44	82.10	.556	.520	-11.294	14.237	10.907	39.142
12	.0226	.026	56.11	81.65	.564	.539	-11.124	14.407	11.306	42.120
13	.0243	.028	56.59	81.62	.569	.540	-11.001	14.530	11.325	45.284
14	.0260	.030	57.18	81.47	.575	.546	-10.848	14.682	11.461	48.448
15	.0280	.032	57.71	81.16	.580	.559	-10.711	14.819	11.732	52.170
16	.0299	.034	58.32	80.99	.587	.566	-10.556	14.975	11.882	55.707
17	.0316	.036	58.82	80.89	.592	.571	-10.426	15.104	11.973	58.871
18	.0379	.043	60.21	80.49	.606	.587	-10.070	15.461	12.323	70.597
19	.0450	.051	61.63	80.07	.620	.605	-9.706	15.825	12.688	83.811
20	.0518	.059	62.97	79.74	.633	.619	-9.361	16.169	12.984	96.468
21	.0579	.066	63.88	79.44	.643	.631	-9.127	16.404	13.244	107.821
22	.0650	.074	65.03	79.19	.654	.642	-8.832	16.699	13.466	121.036
23	.0724	.082	65.86	78.96	.663	.651	-8.615	16.916	13.662	134.809
24	.0778	.088	66.83	78.87	.672	.655	-8.371	17.160	13.749	144.860
25	.0852	.097	67.56	78.70	.679	.662	-8.184	17.347	13.899	158.633
26	.0922	.105	68.31	78.44	.687	.673	-7.989	17.541	14.126	171.661
27	.0982	.112	68.97	78.27	.694	.680	-7.820	17.710	14.275	182.829
28	.1054	.120	69.64	78.02	.700	.691	-7.649	17.882	14.494	196.230
29	.1124	.128	70.28	77.93	.707	.694	-7.486	18.045	14.570	209.258
30	.1177	.134	70.82	77.88	.712	.696	-7.347	18.184	14.613	219.123
31	.1250	.142	71.38	77.66	.718	.706	-7.203	18.328	14.810	232.710
32	.1318	.150	71.93	77.42	.723	.716	-7.060	18.471	15.021	245.366
33	.1491	.169	73.27	77.08	.737	.730	-6.717	18.814	15.322	277.566
34	.1666	.189	74.63	76.90	.751	.738	-6.368	19.163	15.476	310.137
35	.1838	.209	75.68	76.57	.761	.752	-6.099	19.432	15.770	342.150
36	.2020	.230	76.83	76.29	.773	.763	-5.803	19.728	16.011	376.025
37	.2192	.249	77.88	76.09	.783	.772	-5.533	19.998	16.192	408.038
38	.2373	.270	78.99	75.77	.794	.785	-5.248	20.282	16.474	441.726
39	.2638	.288	79.87	75.60	.803	.792	-5.021	20.509	16.615	472.437
40	.2720	.309	80.81	75.35	.813	.803	-4.761	20.750	16.841	506.311
41	.2890	.328	81.79	75.09	.823	.813	-4.530	21.001	17.066	537.952
42	.3068	.349	82.61	74.82	.831	.825	-4.318	21.212	17.301	571.082
43	.3554	.404	85.10	74.37	.856	.844	-3.679	21.852	17.700	661.538
44	.4030	.458	87.42	73.89	.879	.864	-3.084	22.447	18.126	750.132
45	.4508	.512	89.41	73.42	.899	.883	-2.572	22.958	18.535	839.099
46	.4993	.567	91.29	72.94	.918	.903	-2.089	23.442	18.958	929.369
47	.5471	.622	93.11	72.52	.936	.921	-1.622	23.909	19.323	1018.336
48	.5954	.677	94.62	72.20	.952	.935	-1.235	24.296	19.610	1108.238
49	.6428	.730	95.97	71.79	.965	.952	-0.888	24.642	19.967	1196.456
50	.6912	.785	97.01	71.54	.976	.962	-0.620	24.910	20.190	1286.540
51	.7393	.840	97.94	71.35	.985	.970	-0.383	25.147	20.354	1376.065
52	.7874	.895	98.54	71.15	.991	.979	-0.229	25.302	20.535	1465.590
53	.8348	.949	98.89	70.96	.995	.986	-0.139	25.392	20.694	1553.813
54	.883C	1.003	99.18	70.79	.998	.994	-0.061	25.468	20.846	1643.522
55	.9310	1.058	99.36	70.68	1.000	.998	-0.012	25.516	20.940	1732.863
56	.979C	1.112	99.39	70.67	1.000	.999	-0.011	25.520	20.955	1822.202
57	1.C267	1.167	99.46	70.63	1.000	1.000	0.007	25.537	20.991	1910.983
58	1.0752	1.222	99.45	70.63	1.000	1.000	0.004	25.535	20.985	2001.255
59	1.1232	1.276	99.41	70.65	1.000	1.000	0.004	25.526	20.973	2020.592
60	1.1707	1.330	99.43	70.66	1.000	0.999	-0.001	25.530	20.958	2179.000
61	1.2190	1.385	99.42	70.64	1.000	1.000	-0.003	25.527	20.981	2268.898
62	1.2670	1.440	99.51	70.64	1.001	1.000	-0.020	25.550	20.977	2235.58.237
63	1.3146	1.494	99.51	70.62	1.001	1.000	-0.022	25.552	20.993	2446.832
64	1.3632	1.549	99.34	70.60	0.999	1.001	-0.023	25.508	21.011	24537.288
65	1.4114	1.604	99.36	70.61	1.000	1.001	-0.011	25.519	21.003	2626.999
66	1.4556	1.657	99.44	70.64	1.000	0.999	-0.002	25.533	20.979	2714.849
67	1.5074	1.713	99.38	70.65	0.999	0.999	-0.013	25.517	20.970	2805.677
68	1.5864	1.718	99.35	70.67	0.999	0.999	-0.020	25.511	20.956	3469.579
69	2.2210	2.524	99.32	70.69	0.999	0.998	-0.028	25.502	20.937	4133.853
70	2.5782	2.929	99.27	70.68	0.998	0.998	-0.042	25.489	20.942	4798.685
71	2.9351	3.335	99.23	70.69	0.998	0.998	-0.050	25.481	20.936	5462.959
72	3.2918	3.740	99.15	70.72	0.997	0.996	-0.072	25.459	20.907	6126.860
73	3.6496	4.147	99.22	70.71	0.998	0.997	-0.064	25.477	20.917	6792.809
74	4.0072	4.553	99.23	70.69	0.998	0.998	-0.051	25.479	20.932	7458.386

Table 24.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 15. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	SUBLAYER FUNCTION FROM WALL TO $Y^+=35$	STANDARD
FREE STREAM VELOCITY	= 98.651	98.651	
FREE STREAM TEMPERATURE	= 69.252		
WALL TEMPERATURE	= 93.150		
WALL HEAT FLUX	= .07592		
FREE STREAM DENSITY	= .07646		
FREE STREAM KINEMATIC VISCOSITY	= .0001597		
DENSITY OF FLUID AT WALL	= .07315		
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001727		
WALL/FREE STREAM DENSITY RATIO	= .95677		
LOCATION REYNOLDS NUMBER (REX)	= 3106267.22		
INPUT VALUE OF VELOCITY DELTA	= .99000		
INPUT VALUE OF TEMPERATURE DELTA	= 1.04000		
CALCULATED DELTA			.92813
DELTA 99.5% INPUT	= .00000		
DISPLACEMENT THICKNESS (DELSTAR)	= .13942	.13957	
MOMENTUM THICKNESS (THETA)	= .09737	.09752	
ENERGY-DISSIPATION THICKNESS	= .17233	.17238	
ENTHALPY THICKNESS	= .00446	.00446	
SHAPE FACTOR 12 (DELSTAR/THETA)	= 1.43175	1.43113	
SHAPE FACTOR 32 (ENERGY/THETA)	= 1.76974	1.76763	
MOMENTUM THICKNESS REYNOLDS NUMBER	= 5011.94	5019.59	
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 7175.86	7183.68	
SKIN FRICTION COEFFICIENT	= .002829		
FRICITION VELOCITY	= 3.79312		
LAW OF THE WALL CONSTANT (K)	= .41000		
LAW OF THE WALL CONSTANT (C)	= 5.00000		
WAKE STRENGTH			.58780
CLAUSERS 'DELTA' INTEGRAL	= -3.36358	-3.51392	
CLAUSERS 'G' INTEGRAL	= 24.74486	24.74065	
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .13214	.13511	
MOMENTUM THICKNESS - CONSTANT DENSITY	= .09838	.09853	
SHAPE FACTOR 12 - CONSTANT DENSITY	= 1.34325	1.37121	

LOCATION -X- 60.35001

Z = +6 INCHES

Table 25.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 15. GRID NO. 1

REDUCED PROFILE DATA

N	INCHES	Y/	U	T	U/UE	THETA	UTAU	U (+)	T (+)	Y (+)
1	.0056	.006	34.70	85.91	.352	.303	-16.861	9.147	6.352	10.304
2	.0072	.008	38.79	84.58	.393	.358	-15.62	10.226	7.514	13.233
3	.0082	.009	41.90	83.92	.425	.386	-14.962	11.046	8.097	15.063
4	.0092	.010	44.12	83.36	.447	.410	-14.025	11.630	8.585	16.893
5	.0115	.011	45.45	82.98	.461	.425	-14.477	12.535	9.426	18.358
6	.0132	.012	47.55	82.40	.482	.450	-13.477	13.231	9.719	21.103
7	.0142	.014	49.41	82.07	.501	.464	-12.777	13.543	9.984	24.214
8	.0158	.015	50.19	81.77	.509	.476	-12.465	13.900	10.496	26.045
9	.0182	.020	51.37	81.18	.521	.501	-12.108	14.048	11.088	28.973
10	.0199	.021	52.72	80.82	.534	.516	-12.108	14.193	12.816	33.366
11	.0214	.023	53.29	80.51	.540	.529	-11.959	14.234	11.328	36.477
12	.0232	.025	53.99	80.39	.547	.534	-11.773	14.408	11.543	39.223
13	.0250	.027	54.65	80.24	.554	.540	-11.599	14.536	11.804	42.517
14	.0270	.029	55.14	79.99	.563	.551	-11.47	14.655	11.959	45.812
15	.0287	.031	55.59	79.69	.571	.570	-11.149	14.859	12.083	49.472
16	.0305	.033	56.36	79.52	.574	.576	-11.080	14.928	12.480	52.584
17	.0367	.040	58.24	78.92	.590	.595	-10.653	15.355	12.832	55.878
18	.0442	.048	59.74	78.52	.606	.612	-10.558	15.750	13.170	57.592
19	.0506	.055	60.90	78.14	.617	.628	-9.952	16.056	13.442	59.953
20	.0570	.061	62.02	77.83	.629	.641	-9.657	16.351	13.578	60.04
21	.0640	.069	62.99	77.67	.639	.648	-9.401	16.607	13.821	60.04
22	.0710	.077	64.11	77.39	.650	.659	-9.105	16.902	14.038	64.366
23	.0767	.083	64.60	77.15	.655	.670	-8.976	17.032	14.158	67.797
24	.0840	.091	65.47	77.01	.663	.675	-8.775	17.233	14.320	68.09
25	.0910	.098	66.33	76.82	.672	.683	-8.521	17.487	14.478	69.557
26	.0972	.105	66.83	76.64	.677	.691	-8.388	17.620	14.631	69.854
27	.1037	.112	67.60	76.47	.685	.698	-8.185	17.822	14.736	70.248
28	.1108	.119	67.95	76.35	.689	.703	-8.094	17.914	14.896	71.383
29	.1168	.126	68.78	76.17	.697	.711	-7.874	18.134	15.021	72.455
30	.1237	.133	69.28	76.03	.702	.717	-7.744	18.264	15.198	73.594
31	.1308	.141	69.78	75.94	.707	.720	-7.613	18.395	15.370	73.945
32	.1476	.159	71.14	75.59	.721	.735	-7.252	18.756	15.402	74.202
33	.1654	.178	72.41	75.26	.734	.749	-6.918	19.090	15.695	75.781
34	.1826	.197	73.33	75.07	.743	.756	-6.676	19.332	15.856	76.262
35	.2012	.217	74.69	74.88	.757	.765	-6.316	19.691	16.027	76.805
36	.2179	.235	75.72	74.58	.768	.777	-6.045	19.963	16.289	79.870
37	.2360	.254	76.87	74.41	.779	.784	-5.742	20.266	16.437	81.199
38	.2529	.273	77.78	74.17	.788	.794	-5.502	20.506	16.551	82.929
39	.2710	.292	78.63	73.92	.797	.805	-5.279	20.729	16.869	84.057
40	.2880	.310	79.87	73.80	.810	.810	-4.951	21.057	16.977	85.172
41	.3060	.330	80.61	73.63	.817	.817	-4.757	21.251	17.124	86.117
42	.3538	.381	82.95	73.09	.841	.839	-4.139	21.869	17.593	86.603
43	.4022	.433	85.15	72.51	.863	.864	-3.560	22.448	18.108	87.188
44	.4496	.484	87.15	72.08	.883	.882	-3.032	22.976	18.483	88.943
45	.4982	.517	89.16	71.69	.904	.898	-2.496	23.512	18.823	89.944
46	.5462	.589	90.92	71.28	.922	.915	-2.039	23.969	19.188	90.747
47	.5938	.640	92.46	70.90	.937	.931	-1.628	24.380	19.520	91.866
48	.6421	.692	93.97	70.62	.953	.943	-1.233	24.775	19.762	92.269
49	.6900	.743	95.23	70.30	.965	.956	-0.902	25.106	20.040	92.939
50	.7382	.795	96.07	70.04	.974	.967	-0.680	25.228	20.273	93.511
51	.7856	.846	96.98	69.72	.983	.980	-0.440	25.568	20.552	94.313
52	.8342	.899	97.59	69.56	.989	.987	-0.280	25.728	20.693	95.266
53	.8820	.950	98.03	69.49	.994	.990	-0.164	25.844	20.753	96.144
54	.9300	1.002	98.36	69.43	.997	.993	-0.077	25.931	20.808	97.203
55	.9780	1.054	98.60	69.34	.999	.996	-0.014	25.994	20.886	97.905
56	1.0260	1.105	98.56	69.24	1.000	1.001	-0.025	26.016	20.976	98.709
57	1.0736	1.157	98.67	69.26	1.000	1.000	-0.005	26.013	20.957	99.603
58	1.1216	1.208	98.73	69.27	1.001	0.999	-0.020	26.028	20.948	100.528
59	1.1696	1.260	98.63	69.23	1.000	1.001	-0.006	26.022	20.982	101.735
60	1.2176	1.312	98.70	69.27	1.001	0.999	-0.014	26.013	20.945	102.588
61	1.2658	1.364	98.67	69.24	1.000	1.000	-0.019	26.027	20.971	103.168
62	1.3134	1.415	98.72	69.21	1.001	1.002	-0.008	26.016	20.996	104.032
63	1.3622	1.468	98.68	69.20	1.001	1.002	-0.014	26.021	21.012	104.932
64	1.4098	1.519	98.70	69.21	1.001	1.002	-0.002	26.010	21.035	105.365
65	1.4575	1.570	98.66	69.17	1.000	1.003	-0.011	26.019	21.043	106.437
66	1.5060	1.623	98.69	69.16	1.000	1.004	-0.001	26.007	20.954	106.659
67	1.5540	1.670	98.65	69.26	1.000	1.000	-0.029	26.010	20.964	106.882
68	1.6029	1.729	98.65	69.25	1.000	1.000	-0.029	26.007	20.954	107.164
69	2.2198	2.392	98.66	69.21	1.000	1.000	-0.047	25.961	21.009	107.647
70	2.5769	2.776	98.66	69.25	1.000	1.002	-0.052	25.956	21.019	107.777
71	2.9337	3.161	98.54	69.21	1.000	1.003	-0.067	25.940	21.093	108.022
72	3.2911	3.566	98.47	69.20	1.000	1.006	-0.067	25.940	21.093	108.311
73	3.6484	3.931	98.45	69.19	1.000	1.003	-0.067	25.940	21.093	108.601
74	4.0059	4.316	98.40	69.10	1.000	1.006	-0.067	25.940	21.093	108.922

Table 25.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 16. GRID NO. 1

BOUNDARY LAYER PROPERTIES

LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $y^+=35$
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FREE STREAM VELOCITY	=	98.476	98.476
FREE STREAM TEMPERATURE	=	69.477	
WALL TEMPERATURE	=	93.780	
WALL HEAT FLUX	=	.07641	
FREE STREAM DENSITY	=	.07643	
FREE STREAM KINEMATIC VISCOSITY	=	.0001598	
DENSITY OF FLUID AT WALL	=	.07307	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.0001731	
WALL/FREE STREAM DENSITY RATIO	=	.95609	
LOCATION REYNOLDS NUMBER (REX)	=	3098418.12	
INPUT VALUE OF VELOCITY DELTA	=	.99000	
INPUT VALUE OF TEMPERATURE DELTA	=	1.04000	
CALCULATED DELTA	=		.91030
DELTA 99.5% INPUT	=	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	=	.13722	.13709
MOMENTUM THICKNESS (THETA)	=	.09504	.09542
ENERGY-DISSIPATION THICKNESS	=	.16831	.16864
ENTHALPY THICKNESS	=	.00469	.00471
SHAPE FACTOR 12 (DELSTAR/THETA)	=	1.44375	1.43668
SHAPE FACTOR 32 (ENERGY/THETA)	=	1.77083	1.76736
MOMENTUM THICKNESS REYNOLDS NUMBER	=	4879.66	4899.00
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	7045.04	7038.29
SKIN FRICTION COEFFICIENT	=	.002840	
FRICTION VELOCITY	=	3.79496	
LAW OF THE WALL CONSTANT (K)	=	.41000	
LAW OF THE WALL CONSTANT (C)	=	5.00000	
WAKE STRENGTH	=		.58622
CLAUSERS 'DELTA' INTEGRAL	=	-3.23069	-3.43530
CLAUSERS 'G' INTEGRAL	=	24.54730	24.18402
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.12852	.13239
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.09608	.09647
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.33765	1.37230

LOCATION -X- 60.35001

Z = -6 INCHES

Table 26.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 16. GRID NO. 1

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELT A	U FT/SEC	T DEG.F	U/UE	THETA	U-UE	U(+)	T(+)	Y(+)
1	.0080	.009	40.87	84.77	.415	.371	-15.180	10.770	7.847	14.675
2	.0092	.010	42.85	84.22	.435	.393	-14.658	11.291	8.325	16.868
3	.0103	.011	44.87	83.46	.456	.424	-14.125	11.825	6.971	18.878
4	.0112	.012	46.43	83.03	.472	.442	-13.714	12.235	9.361	20.523
5	.0124	.014	48.42	82.63	.492	.459	-13.191	12.758	9.716	22.716
6	.0139	.015	49.46	82.31	.502	.472	-12.916	13.033	9.987	25.457
7	.0156	.017	51.05	81.96	.518	.485	-12.496	13.453	10.274	28.564
8	.0165	.018	51.84	81.84	.526	.491	-12.290	13.659	10.403	30.208
9	.0204	.020	52.57	81.57	.534	.504	-12.096	13.853	10.659	33.680
10	.0224	.022	53.33	81.14	.542	.520	-11.897	14.052	11.011	37.335
11	.0239	.024	54.11	80.96	.549	.528	-11.690	14.259	11.168	40.625
12	.0256	.026	54.95	80.58	.558	.543	-11.475	14.474	11.500	43.732
13	.0274	.028	55.22	80.22	.561	.558	-11.400	14.550	11.808	46.838
14	.0294	.030	56.06	80.00	.569	.556	-11.176	14.773	11.779	50.128
15	.0316	.032	56.45	80.18	.573	.560	-11.075	14.874	11.847	53.052
16	.0335	.035	57.13	79.98	.580	.566	-10.894	15.056	12.023	57.803
17	.0326	.036	57.38	79.86	.583	.573	-10.830	15.119	12.120	59.996
18	.0352	.043	58.80	79.36	.597	.593	-10.456	15.493	12.559	71.682
19	.0466	.051	60.22	79.06	.611	.608	-10.082	15.668	12.870	85.215
20	.0530	.058	61.36	78.56	.623	.626	-9.776	16.173	13.255	96.911
21	.0590	.065	62.21	78.28	.632	.638	-9.555	16.394	13.503	107.876
22	.0655	.073	63.36	78.06	.644	.647	-9.248	16.701	13.692	121.582
23	.0732	.080	64.26	77.94	.653	.652	-9.017	16.933	13.792	133.826
24	.0792	.087	64.91	77.75	.659	.660	-8.844	17.105	13.960	144.791
25	.0865	.095	65.76	77.53	.668	.669	-8.616	17.334	14.155	158.132
26	.0936	.103	66.50	77.33	.675	.669	-8.425	17.524	14.156	171.107
27	.0990	.109	67.24	77.30	.683	.678	-8.232	17.717	14.355	180.975
28	.1060	.116	67.86	77.07	.689	.688	-8.067	17.882	14.553	193.768
29	.1130	.124	68.56	76.84	.696	.697	-7.883	18.067	14.759	206.560
30	.1196	.131	69.06	76.70	.701	.703	-7.752	18.197	14.878	218.621
31	.1260	.138	69.51	76.53	.706	.710	-7.633	18.316	15.021	230.317
32	.1331	.146	70.06	76.38	.711	.716	-7.489	18.460	15.152	243.292
33	.1502	.165	71.46	76.18	.726	.724	-7.119	18.830	15.331	274.542
34	.1678	.184	72.74	75.95	.739	.734	-6.783	19.167	15.528	306.706
35	.1856	.204	73.79	75.62	.749	.747	-6.505	19.444	15.820	339.235
36	.2032	.223	74.92	75.34	.761	.759	-6.208	19.741	16.058	371.399
37	.2202	.242	76.07	75.03	.773	.771	-5.903	20.046	16.329	402.466
38	.2362	.262	77.03	74.84	.782	.779	-5.650	20.299	16.492	435.360
39	.2552	.280	78.17	74.63	.794	.788	-5.352	20.597	16.680	466.428
40	.2732	.300	79.06	74.38	.803	.798	-5.116	20.833	16.898	499.322
41	.2933	.319	79.98	74.19	.812	.806	-4.874	21.075	17.062	530.572
42	.3063	.339	80.81	73.97	.821	.815	-4.654	21.295	17.254	563.467
43	.3562	.391	83.06	73.42	.845	.838	-4.031	21.918	17.735	651.003
44	.4041	.444	85.42	72.97	.867	.856	-3.441	22.508	18.129	738.539
45	.4522	.497	87.47	72.57	.888	.873	-2.900	23.049	18.475	826.075
46	.5000	.549	89.49	72.02	.909	.895	-2.367	23.582	18.953	913.794
47	.5486	.603	91.20	71.58	.926	.914	-1.917	24.032	19.337	1002.610
48	.5965	.655	92.80	71.25	.942	.927	-1.495	24.455	19.622	1090.146
49	.6443	.708	94.24	70.86	.957	.943	-1.115	24.834	19.967	1177.500
50	.6920	.760	95.41	70.56	.969	.955	-0.807	25.142	20.224	1264.671
51	.7401	.813	96.35	70.27	.978	.967	-0.561	25.388	20.474	1352.572
52	.7866	.866	97.17	69.97	.987	.980	-0.345	25.604	20.735	1440.109
53	.8362	.919	97.61	69.93	.991	.982	-0.228	25.722	20.776	1528.193
54	.8845	.972	98.04	69.70	.996	.991	-0.116	25.834	20.972	1616.860
55	.9320	1.024	98.29	69.57	1.000	.997	-0.050	25.899	21.087	1703.266
56	.9800	1.077	98.45	69.55	1.000	.999	-0.006	25.943	21.106	1790.985
57	1.0282	1.130	98.40	69.51	1.000	.999	-0.019	25.930	21.139	1879.069
58	1.0763	1.182	98.54	69.51	1.001	.999	-0.017	25.966	21.137	1966.971
59	1.1242	1.235	98.48	69.45	1.000	1.001	-0.002	25.951	21.189	2054.507
60	1.1726	1.288	98.46	69.47	1.000	1.001	-0.003	25.946	21.175	2142.957
61	1.2206	1.341	98.50	69.46	1.000	1.001	-0.006	25.955	21.183	2230.676
62	1.2682	1.393	98.49	69.48	1.000	1.000	-0.004	25.953	21.167	2317.664
63	1.3158	1.445	98.52	69.49	1.000	1.000	-0.011	25.960	21.157	2404.652
64	1.3642	1.499	98.51	69.47	1.000	1.000	-0.010	25.959	21.173	2493.102
65	1.4122	1.551	98.53	69.49	1.001	.999	-0.015	25.964	21.154	2580.821
66	1.4598	1.604	98.42	69.50	1.000	.999	-0.014	25.935	21.148	2667.809
67	1.5054	1.657	98.46	69.52	1.000	.998	-0.004	25.945	21.128	2756.625
68	1.8650	2.049	98.50	69.54	1.000	.998	-0.006	25.955	21.116	3408.304
69	2.2221	2.441	98.49	69.51	1.000	.998	-0.003	25.952	21.135	4060.897
70	2.5797	2.834	98.42	69.56	1.000	.999	-0.016	25.934	21.096	4714.403
71	2.9363	3.226	98.48	69.56	1.000	.996	-0.001	25.950	21.091	5366.082
72	3.2936	3.618	98.36	69.62	1.000	.994	-0.025	25.924	21.047	6019.041
73	3.6508	4.011	98.36	69.65	1.000	.993	-0.030	25.919	21.013	6671.816
74	4.0082	4.403	98.40	69.67	1.000	.992	-0.021	25.928	20.998	7324.957

Table 26.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 17. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	SUBLAYER FUNCTION FROM WALL TO $Y^+=35$	STANDARD
FREE STREAM VELOCITY =	98.14	98.614	
FREE STREAM TEMPERATURE =	70.040		
WALL TEMPERATURE =	95.010		
WALL HEAT FLUX =	.07759		
FREE STREAM DENSITY =	.07634		
FREE STREAM KINEMATIC VISCOSITY =	.0001601		
DENSITY OF FLUID AT WALL =	.07291		
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001737		
WALL/FREE STREAM DENSITY RATIO =	.95498		
LOCATION REYNOLDS NUMBER (REX) =	3510027.12		
INPUT VALUE OF VELOCITY DELTA =	1.12000		
INPUT VALUE OF TEMPERATURE DELTA =	1.17000		
CALCULATED DELTA =			.98175
DELTA 99.5% INPUT =	.00000		
DISPLACEMENT THICKNESS (DELSTAR) =	.14349		.14353
MOMENTUM THICKNESS (THETA) =	.10037		.10059
ENERGY-DISSIPATION THICKNESS =	.17814		.17829
ENTHALPY THICKNESS =	.00512		.00513
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.42968		1.42692
SHAPE FACTOR 32 (ENERGY/THETA) =	1.77486		1.77245
MOMENTUM THICKNESS REYNOLDS NUMBER =	5150.40		5161.75
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	7363.42		7365.42
SKIN FRICTION COEFFICIENT =	.002849		
FRICITION VELOCITY =	3.80844		
LAW OF THE WALL CONSTANT (K) =	.41000		
LAW OF THE WALL CONSTANT (C) =	5.00000		
WAKE STRENGTH =			.53724
CLAUSERS 'DELTA' INTEGRAL =	-3.41653		-3.58388
CLAUSERS 'G' INTEGRAL =	24.74967		24.61548
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.13516		.13841
MOMENTUM THICKNESS - CONSTANT DENSITY =	.10146		.10169
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.33213		1.36101
LOCATION -X- =	68.39999		
Z = CENTERLINE			

Table 27.

JOB KLD4B TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 17. GRID NO. 1

REDUCED PRCFILE DATA

N	INCHES	Y/ INCHES	U FT/SEC	T DEG.F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.0064	.007	36.92	87.01	.374	.320	-16.200	9.693	6.871	11.746
2	.0076	.008	39.97	86.02	.405	.360	-15.398	10.495	7.721	13.939
3	.0086	.009	42.51	85.39	.431	.385	-14.733	11.161	8.265	15.765
4	.0095	.010	44.53	84.92	.452	.404	-14.202	11.692	8.667	17.409
5	.0106	.011	46.30	84.36	.470	.426	-13.836	12.158	9.146	19.419
6	.0123	.013	48.41	83.64	.491	.455	-13.181	12.713	9.765	22.524
7	.0137	.014	49.73	83.20	.504	.473	-12.637	13.257	10.359	25.082
8	.0147	.015	50.49	82.95	.512	.483	-12.205	13.626	10.674	26.909
9	.0166	.017	51.90	82.58	.526	.498	-12.267	13.889	11.089	30.380
10	.0190	.019	52.90	82.10	.536	.517	-12.005	14.161	11.303	34.764
11	.0210	.021	53.93	81.85	.547	.527	-11.733	14.290	11.481	36.418
12	.0223	.023	54.42	81.64	.552	.535	-11.603	14.459	11.718	40.793
13	.0239	.024	55.07	81.37	.556	.546	-11.435	14.621	11.886	43.715
14	.0260	.027	55.68	81.17	.565	.554	-11.273	14.742	12.088	47.552
15	.0276	.028	56.14	80.94	.569	.564	-11.152	14.933	12.297	50.475
16	.0300	.031	56.87	80.69	.577	.573	-10.960	15.001	12.383	54.859
17	.0313	.032	57.13	80.59	.579	.577	-10.892	15.390	12.686	57.234
18	.0377	.038	58.61	80.24	.594	.592	-10.503	15.767	12.992	68.925
19	.0445	.045	60.05	79.88	.609	.606	-10.126	16.113	13.391	81.348
20	.0516	.053	61.36	79.42	.622	.624	-9.781	16.346	13.641	94.318
21	.0577	.059	62.25	79.13	.631	.636	-9.547	16.595	13.856	105.461
22	.0647	.066	63.20	78.88	.641	.646	-9.299	16.848	14.040	118.249
23	.0717	.073	64.16	78.66	.651	.655	-9.046	17.101	14.210	141.632
24	.0775	.079	65.13	78.47	.660	.663	-8.793	17.312	14.334	155.150
25	.0849	.087	65.93	78.32	.669	.668	-8.582	17.500	14.496	167.573
26	.0917	.093	66.65	78.13	.676	.676	-8.394	17.622	14.549	178.168
27	.0975	.099	67.11	78.07	.681	.678	-8.272	17.846	14.740	191.138
28	.1046	.107	67.97	77.85	.689	.687	-8.046	17.970	14.954	203.561
29	.1114	.114	68.44	77.60	.694	.697	-7.924	18.174	15.121	215.435
30	.1179	.120	69.21	77.40	.702	.705	-7.720	18.288	15.193	228.223
31	.1249	.127	69.65	77.32	.706	.708	-7.608	18.438	15.223	241.010
32	.1319	.134	70.22	77.29	.712	.710	-7.456	18.762	15.509	272.066
33	.1469	.152	71.46	76.95	.725	.723	-7.131	19.056	15.884	303.852
34	.1663	.169	72.56	76.52	.736	.741	-6.835	19.382	16.078	335.456
35	.1836	.187	73.81	76.29	.749	.750	-6.622	19.614	16.243	368.521
36	.2017	.205	74.70	76.10	.757	.757	-6.260	19.924	16.392	399.577
37	.2187	.223	75.88	75.52	.769	.764	-5.969	19.924	16.392	399.577
38	.2369	.241	76.69	75.60	.778	.777	-5.758	20.136	16.672	432.825
39	.2536	.258	77.77	75.32	.789	.789	-5.472	20.421	16.912	463.332
40	.2717	.277	78.75	75.25	.799	.791	-5.216	20.677	16.974	496.397
41	.2887	.294	79.37	74.90	.805	.805	-5.053	20.841	17.273	527.453
42	.3070	.313	80.50	74.67	.816	.815	-4.756	21.138	17.471	560.884
43	.3547	.361	82.55	74.24	.837	.832	-4.219	21.675	17.843	648.022
44	.4025	.410	84.81	73.81	.860	.849	-3.625	22.269	18.208	735.343
45	.4505	.459	86.71	73.27	.879	.871	-3.126	22.768	18.669	823.030
46	.4990	.506	88.45	72.96	.897	.883	-2.670	23.224	18.937	911.630
47	.5471	.557	90.19	72.55	.915	.900	-2.180	23.683	19.291	999.499
48	.5949	.606	91.73	72.30	.930	.910	-1.807	24.087	19.507	1086.820
49	.6426	.655	93.05	71.96	.944	.923	-1.460	24.434	19.799	1173.959
50	.6909	.704	94.41	71.44	.957	.944	-1.103	24.790	20.240	1262.193
51	.7388	.753	95.44	71.24	.968	.952	-0.834	25.059	20.415	1349.697
52	.7869	.802	96.48	70.92	.978	.965	-0.562	25.332	20.689	1437.567
53	.8345	.850	97.41	70.65	.985	.976	-0.395	25.498	.921	1524.522
54	.8826	.899	97.72	70.51	.991	.981	-0.235	25.659	.041	1612.392
55	.9305	.948	98.04	70.31	.994	.989	-0.151	25.743	.214	1699.896
56	.9791	.997	98.31	70.24	.997	.992	-0.060	25.814	.272	1788.678
57	1.0267	1.046	98.46	70.15	.999	.995	-0.035	25.859	.348	1875.634
58	1.0748	1.095	98.57	70.13	1.000	.996	-0.013	25.882	.368	1963.503
59	1.1227	1.144	98.60	70.07	1.000	.999	-0.003	25.891	.417	2051.007
60	1.1707	1.192	98.62	70.03	1.000	1.000	0.002	25.895	456	2138.694
61	1.2189	1.242	98.62	70.04	1.000	1.000	0.001	25.894	448	2226.746
62	1.2669	1.290	98.64	70.05	1.000	1.000	0.007	25.900	433	2314.432
63	1.3143	1.339	98.66	70.02	1.000	1.001	-0.004	25.890	466	2401.023
64	1.3629	1.388	98.75	70.02	1.000	1.001	-0.035	25.928	463	2489.806
65	1.4108	1.437	98.57	70.03	1.000	1.000	-0.011	25.882	453	2577.309
66	1.4583	1.485	98.60	70.00	1.000	1.000	-0.005	25.893	443	2664.083
67	1.5067	1.535	98.61	70.04	1.000	1.000	-0.013	25.881	451	3404.486
68	1.8636	1.898	98.57	70.03	1.000	1.000	-0.021	25.872	466	4057.203
69	2.2209	2.262	98.53	70.02	.999	1.000	-0.038	25.844	503	4709.737
70	2.2578	2.626	98.43	69.97	.999	1.000	-0.062	25.856	456	5361.541
71	2.2949	2.989	98.47	69.93	.998	1.000	-0.038	25.832	533	6013.710
72	2.2919	3.353	98.38	69.94	.998	1.000	-0.062	25.814	531	6666.610
73	3.6493	3.717	98.41	69.89	.998	1.000	-0.052	25.841	5571	7319.326
74	4.0066	4.081	98.46	69.91	.998	1.005	-0.041	25.852	5556	7319.326

Table 27.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 18. GRID NO. 1

BOUNDARY LAYER PROPERTIES

LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $y+=35$
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FREE STREAM VELOCITY =	98.671	98.671
FREE STREAM TEMPERATURE =	69.947	
WALL TEMPERATURE =	95.560	
WALL HEAT FLUX =	.07697	
FREE STREAM DENSITY =	.67636	
FREE STREAM KINEMATIC VISCOSITY =	.0001601	
DENSITY OF FLUID AT WALL =	.07284	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001740	
WALL/FREE STREAM DENSITY RATIO =	.95387	
LOCATION REYNOLDS NUMBER (REX) =	3918913.37	
INPUT VALUE OF VELOCITY DELTA =	1.20000	
INPUT VALUE OF TEMPERATURE DELTA =	1.50000	
CALCULATED DELTA =		1.10966
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.16027	.16044
MOMENTUM THICKNESS (THETA) =	.11264	.11274
ENERGY-DISSIPATION THICKNESS =	.19996	.19998
ENTHALPY THICKNESS =	.00589	.00589
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.42280	1.42310
SHAPE FACTOR 32 (ENERGY/THETA) =	1.77521	1.77379
MOMENTUM THICKNESS REYNOLDS NUMBER =	5785.48	5790.51
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	8231.60	8240.50
SKIN FRICTION COEFFICIENT =	.002786	
FRICTION VELOCITY =	3.77084	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.53787
CLAUSERS 'DELTA' INTEGRAL =	-3.91339	-4.04434
CLAUSERS 'G' INTEGRAL =	27.71205	27.76016
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.15197	.15456
MOMENTUM THICKNESS - CONSTANT DENSITY =	.11391	.11402
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.33410	1.35559

LOCATION -X- 76.30000

Z = CENTERLINE

Table 28.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79
 RUN NO. 8. POINT 18. GRID NO. 1

REDUCED PROFILE DATA

N	Y INCHES	Y/	U	T	U/UE	THETA	U-UE	UTAU	U(+)	T(+)	Y(+)
1	.0048	.004	30.26	88.89	.307	.260	-18.143	8.023	5.710	8.721	
2	.0058	.005	33.35	87.92	.338	.298	-17.324	8.843	6.544	10.527	
3	.0068	.006	36.75	86.83	.372	.341	-16.421	9.746	7.477	12.332	
4	.0078	.007	40.22	86.11	.408	.369	-15.502	10.665	8.089	14.138	
5	.0088	.008	42.95	85.72	.435	.384	-14.777	11.390	8.429	15.944	
6	.0107	.010	46.26	84.96	.469	.414	-13.894	12.273	9.079	19.374	
7	.0122	.011	48.20	84.24	.495	.449	-13.203	12.783	9.693	22.083	
8	.0128	.012	48.89	84.07	.511	.465	-12.789	13.378	10.209	23.166	
9	.0148	.013	50.44	83.64	.525	.485	-12.432	13.735	10.641	26.777	
10	.0171	.015	51.79	83.13	.536	.497	-12.130	14.037	10.901	30.930	
11	.0191	.017	52.93	82.83	.540	.507	-12.042	14.125	11.110	34.541	
12	.0207	.019	53.26	82.59	.549	.516	-11.811	14.356	11.324	37.430	
13	.0224	.020	54.13	82.34	.555	.520	-11.642	14.525	11.615	40.500	
14	.0240	.022	54.77	82.23	.559	.539	-11.538	14.629	11.833	43.389	
15	.0261	.024	55.16	81.74	.567	.550	-11.343	14.824	12.075	47.181	
16	.0266	.025	55.90	81.46	.570	.555	-11.261	14.905	12.173	50.792	
17	.0296	.027	56.21	80.98	.584	.569	-10.882	15.285	12.482	53.500	
18	.0358	.039	57.64	80.48	.600	.589	-10.456	15.709	12.918	64.695	
19	.0426	.045	59.24	80.21	.613	.599	-10.134	16.033	13.147	77.334	
20	.0558	.050	61.45	79.96	.623	.609	-9.871	16.296	13.359	91.057	
21	.0629	.057	62.40	79.51	.632	.627	-9.620	16.547	13.747	100.807	
22	.0701	.063	63.31	79.22	.642	.638	-9.377	16.790	13.989	113.627	
23	.0762	.069	64.07	79.02	.649	.646	-9.176	16.991	14.167	126.627	
24	.0832	.075	64.88	78.80	.656	.654	-8.961	17.206	14.350	137.642	
25	.0898	.081	65.54	78.60	.664	.659	-8.787	17.380	14.457	150.281	
26	.0961	.087	66.12	78.49	.670	.667	-8.632	17.535	14.620	162.198	
27	.1030	.093	66.72	78.34	.676	.672	-8.474	17.693	14.751	173.573	
28	.1102	.099	67.55	78.18	.685	.678	-8.254	17.913	14.880	186.032	
29	.1158	.104	67.93	78.03	.688	.684	-8.052	18.015	15.009	199.032	
30	.1222	.111	68.36	77.94	.693	.688	-8.039	18.128	15.089	209.144	
31	.1300	.117	69.19	77.80	.701	.693	-7.817	18.350	15.207	221.783	
32	.1470	.133	70.38	77.33	.713	.712	-7.504	18.663	15.615	234.783	
33	.1646	.148	71.44	77.10	.724	.721	-7.221	18.946	15.808	265.479	
34	.1824	.164	72.58	76.66	.736	.738	-6.918	19.249	16.182	297.257	
35	.2001	.180	73.80	76.40	.748	.748	-6.596	19.570	16.408	329.397	
36	.2171	.196	74.32	76.20	.753	.756	-6.457	19.710	16.578	361.357	
37	.2348	.212	75.38	76.11	.764	.759	-6.178	19.989	16.653	392.052	
38	.2524	.227	76.38	75.83	.774	.770	-5.912	20.255	16.896	424.011	
39	.2721	.243	77.36	75.58	.784	.780	-5.653	20.514	17.108	455.790	
40	.2870	.259	78.02	75.32	.791	.790	-5.476	20.691	17.332	518.264	
41	.3054	.275	78.85	75.08	.799	.800	-5.255	20.912	17.540	551.487	
42	.3566	.321	80.95	74.65	.820	.817	-4.700	21.466	17.910	643.935	
43	.4082	.368	83.05	74.10	.842	.838	-4.144	21.602	18.376	737.104	
44	.4602	.415	84.98	73.84	.861	.848	-3.630	21.857	18.600	830.996	
45	.5122	.462	86.92	73.38	.881	.866	-3.115	22.052	18.998	924.887	
46	.5641	.508	88.54	72.92	.897	.884	-2.687	22.347	19.385	1018.599	
47	.6158	.555	90.27	72.48	.915	.901	-2.227	23.920	19.768	1111.949	
48	.6676	.602	91.92	72.02	.932	.919	-1.790	24.377	20.163	1205.479	
49	.7197	.649	93.13	71.74	.944	.930	-1.469	24.698	20.401	1299.551	
50	.7708	.695	94.26	71.37	.955	.944	-1.170	24.997	20.717	1391.818	
51	.8232	.742	95.49	71.15	.968	.953	-8.44	25.323	20.904	1486.432	
52	.8748	.788	96.33	70.85	.976	.965	-6.21	25.546	21.159	1579.601	
53	.9268	.835	97.09	70.61	.984	.974	-4.19	25.748	21.370	1673.493	
54	.9797	.882	97.59	70.48	.991	.989	-2.287	25.880	21.476	1767.746	
55	1.0307	.929	98.09	70.28	.994	.987	-1.54	26.013	21.653	1861.096	
56	1.0622	.975	98.31	70.18	.996	.991	-0.96	26.071	21.738	1954.065	
57	1.1343	1.022	98.47	70.06	.998	.996	-0.54	26.113	21.838	2046.157	
58	1.1858	1.069	98.60	70.05	1.000	.996	-0.020	26.147	21.843	2141.146	
59	1.2382	1.116	98.68	70.00	1.000	.998	-0.03	26.170	21.892	2235.760	
60	1.2898	1.162	98.67	69.96	1.000	1.000	-0.02	26.165	21.923	226.929	
61	1.3421	1.208	98.67	69.95	1.000	1.000	-0.01	26.166	21.929	2423.363	
62	1.3936	1.256	98.74	69.92	1.000	1.001	-0.01	26.185	21.955	2516.352	
63	1.4452	1.302	98.82	69.96	1.000	1.001	-0.01	26.205	21.922	2609.521	
64	1.4968	1.349	98.67	70.01	1.000	1.000	-0.01	26.168	21.878	2702.691	
65	1.5491	1.396	98.65	69.91	1.000	1.002	-0.05	26.162	21.970	2797.124	
66	1.6008	1.443	98.72	69.87	1.000	1.003	-0.14	26.181	21.997	2890.474	
67	1.6531	1.490	98.66	69.91	1.000	1.001	-0.03	26.164	21.965	2984.907	
68	1.7054	1.537	98.69	69.89	1.000	1.002	-0.06	26.173	21.980	3079.341	
69	2.0335	1.832	98.60	69.84	0.999	1.004	-0.19	26.148	22.020	3670.858	
70	2.3622	2.129	98.57	69.81	0.999	1.005	-0.27	26.140	22.056	4265.265	
71	2.6902	2.424	98.60	69.90	0.998	1.002	-0.20	26.147	22.071	4855.7505	
72	3.0190	2.721	98.44	69.89	0.998	1.005	-0.62	26.105	22.085	5451.189	
73	3.3477	3.013	98.46	69.83	0.998	1.004	-0.55	26.112	22.037	6044.693	
74	3.6758	3.313	98.42	69.82	0.997	1.005	-0.67	26.100	22.042	6637.114	
75	4.0050	3.609	98.45	69.84	0.998	1.004	-0.59	26.108	22.022	7231.520	

Table 28.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 20. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $y+=35$
FREE STREAM VELOCITY	= 98.533	98.533
FREE STREAM TEMPERATURE	= 69.564	
WALL TEMPERATURE	= 95.170	
WALL HEAT FLUX	= .07723	
FREE STREAM DENSITY	= .07641	
FREE STREAM KINEMATIC VISCOSITY	= .0001599	
DENSITY OF FLUID AT WALL	= .07289	
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001738	
WALL/FREE STREAM DENSITY RATIO	= .95385	
LOCATION REYNOLDS NUMBER (REX)	= 3918444.28	
INPUT VALUE OF VELOCITY DELTA	= 1.29000	
INPUT VALUE OF TEMPERATURE DELTA	= 1.29000	
CALCULATED DELTA	=	1.15058
DELTA 99.5% INPUT	= .00000	
DISPLACEMENT THICKNESS (DELSTAR)	= .16980	.17000
MOMENTUM THICKNESS (THETA)	= .11912	.11919
ENERGY-DISSIPATION THICKNESS	= .21112	.21110
ENTHALPY THICKNESS	= .00605	.00605
SHAPE FACTOR 12 (DELSTAR/THETA)	= 1.42545	1.42622
SHAPE FACTOR 32 (ENERGY/THETA)	= 1.77237	1.77110
MOMENTUM THICKNESS REYNOLDS NUMBER	= 6117.51	6121.30
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 8720.19	8730.34
SKIN FRICTION COEFFICIENT	= .002719	
FRICTION VELOCITY	= 3.72008	
LAW OF THE WALL CONSTANT (K)	= .41000	
LAW OF THE WALL CONSTANT (C)	= 5.00000	
WAKE STRENGTH	=	.59151
CLAUSERS 'DELTA' INTEGRAL	= -4.20931	-4.34254
CLAUSERS 'G' INTEGRAL	= 30.37478	30.45977
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .16134	.16395
MOMENTUM THICKNESS - CONSTANT DENSITY	= .12045	.12053
SHAPE FACTOR 12 - CONSTANT DENSITY	= 1.33939	1.36021
LOCATION -x-	76.30000	
Z = -6 INCHES		

Table 29.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 20. GRID NO. 1

REDUCED PROFILE DATA

N	Y INCHES	Y/ INCHES	U FT/SEC	T DEG.F	U/UE	THETA	U-UE	UTAU	U(+)	T(+)	Y(+)
1	.0048	.004	30.93	88.44	.314	.263	-18.172	8.315	5.674	8.614	
2	.0058	.005	33.45	87.55	.339	.298	-17.496	8.991	6.424	10.398	
3	.0068	.006	36.49	86.80	.370	.327	-16.879	9.808	7.057	12.181	
4	.0078	.007	39.42	86.06	.400	.356	-15.892	10.595	7.678	13.965	
5	.0082	.008	42.78	85.11	.434	.393	-14.987	11.500	8.476	16.462	
6	.0107	.009	45.08	84.63	.458	.411	-14.368	12.119	8.878	19.137	
7	.0118	.011	46.44	84.17	.471	.430	-14.044	12.483	9.270	21.099	
8	.0128	.012	47.52	83.62	.482	.451	-13.713	12.774	9.735	22.882	
9	.0148	.013	49.25	82.11	.500	.471	-13.247	13.240	10.158	26.449	
10	.0168	.015	50.57	82.66	.513	.486	-12.893	13.594	10.527	24.017	
11	.0192	.017	51.66	82.46	.524	.496	-12.595	13.892	10.708	24.297	
12	.0207	.018	52.53	82.07	.533	.512	-12.367	14.120	11.037	23.972	
13	.0215	.019	52.79	81.84	.536	.521	-12.096	14.191	11.232	23.893	
14	.0244	.021	53.83	81.58	.546	.532	-11.868	14.469	11.452	23.571	
15	.0262	.023	54.38	81.55	.552	.532	-11.619	14.619	11.474	24.6782	
16	.0283	.025	54.89	81.26	.557	.543	-11.371	14.756	11.722	25.0527	
17	.0297	.026	55.21	81.12	.560	.549	-11.1645	14.841	11.843	25.024	
18	.036C	.021	56.93	80.58	.578	.570	-11.183	15.304	12.293	24.260	
19	.0433	.038	58.30	79.98	.592	.593	-10.816	15.671	12.795	24.280	
20	.050C	.043	59.42	79.68	.603	.605	-10.515	15.972	13.053	24.229	100.822
21	.0565	.049	60.51	79.41	.614	.615	-10.220	16.266	13.279	112.771	
22	.0632	.055	61.37	79.28	.623	.621	-9.991	16.496	13.390	125.256	
23	.0702	.061	62.44	79.07	.634	.629	-9.701	16.786	13.565	135.957	
24	.0762	.066	63.03	78.80	.640	.639	-9.545	16.942	13.791	148.263	
25	.0831	.072	63.89	78.58	.648	.648	-9.313	17.174	13.982	160.391	
26	.0869	.076	64.66	78.45	.656	.653	-9.105	17.382	14.088	171.092	
27	.0959	.083	65.15	78.15	.661	.665	-8.975	17.512	14.343	184.647	
28	.1035	.090	66.02	77.94	.670	.673	-8.740	17.746	14.515	206.941	
29	.1102	.096	66.59	77.83	.676	.677	-8.587	17.900	14.614	219.069	
30	.1160	.101	67.66	77.74	.681	.681	-8.462	18.025	14.687	221.069	
31	.1228	.107	67.74	77.68	.687	.683	-8.279	18.208	14.739	231.553	
32	.1298	.113	68.22	77.37	.692	.695	-8.149	18.338	14.997	231.765	
33	.1473	.128	69.37	76.97	.704	.711	-7.838	18.648	15.339	241.245	
34	.1646	.143	70.49	76.88	.715	.714	-7.537	18.950	15.413	249.3620	
35	.1816	.158	71.54	76.46	.726	.731	-7.256	19.231	15.763	252.4296	
36	.2002	.174	72.72	76.13	.738	.744	-6.939	19.547	16.042	255.113	
37	.2169	.189	73.36	75.99	.744	.749	-6.783	19.704	16.164	258.897	
38	.235C	.204	74.42	75.80	.755	.756	-6.482	20.005	16.319	241.179	
39	.2522	.219	75.22	75.49	.763	.769	-6.268	20.219	16.582	249.855	
40	.2698	.235	76.16	75.28	.773	.777	-6.015	20.472	16.762	262.245	
41	.2869	.249	77.00	75.01	.781	.787	-5.788	20.698	16.986	271.743	
42	.3052	.265	77.73	74.98	.789	.788	-5.593	20.894	17.009	274.382	
43	.3566	.310	79.99	74.40	.812	.811	-4.985	21.502	17.497	277.054	
44	.4078	.354	81.96	73.98	.832	.828	-4.4555	22.532	17.857	282.370	
45	.46C4	.400	83.94	73.51	.852	.846	-3.923	22.564	18.251	281.183	
46	.5122	.445	85.76	73.02	.870	.865	-3.533	23.054	18.660	291.569	
47	.5636	.490	87.47	72.69	.888	.878	-2.974	23.513	18.942	300.776	
48	.6158	.535	89.07	72.39	.904	.890	-2.544	23.943	19.196	309.905	
49	.6677	.580	90.63	71.91	.920	.909	-2.125	24.362	19.603	319.054	
50	.7197	.626	92.05	71.38	.934	.929	-1.424	24.745	20.047	328.647	
51	.7710	.670	93.36	71.19	.947	.937	-1.391	25.096	20.208	337.5142	
52	.8231	.715	94.55	70.87	.960	.949	-1.070	25.417	20.479	346.8063	
53	.8751	.761	95.29	70.57	.967	.961	-873	25.614	20.725	356.805	
54	.9272	.806	96.46	70.42	.979	.967	-5.559	25.926	20.858	365.3726	
55	.9790	.851	97.02	70.14	.985	.978	-4.08	26.079	21.094	374.112	
56	1.0306	.896	97.56	69.95	.990	.985	-2.63	26.224	21.252	383.8141	
57	1.0823	.941	98.02	69.92	.995	.986	-1.37	26.350	21.276	393.0349	
58	1.1341	.986	98.22	69.73	.997	.994	-1.032	26.404	21.438	402.2220	
59	1.1863	1.031	98.42	69.67	.999	.996	-0.32	26.455	21.486	411.834	
60	1.2381	1.076	98.41	69.59	1.000	1.000	-0.032	26.495	21.558	423.000	
61	1.2900	1.121	98.56	69.58	1.000	1.000	-0.005	26.474	21.566	433.884	
62	1.3422	1.167	98.55	69.57	1.000	1.000	-0.017	26.492	21.572	443.885	
63	1.3936	1.211	98.49	69.55	1.000	1.000	-0.013	26.474	21.589	454.557	
64	1.4448	1.256	98.54	69.60	1.000	1.000	-0.003	26.490	21.547	467.872	
65	1.4974	1.301	98.57	69.60	1.000	1.000	-0.010	26.497	21.549	476.065	
66	1.5492	1.346	98.50	69.54	1.000	1.001	-0.009	26.478	21.593	486.071	
67	1.6008	1.391	98.60	69.47	1.000	1.004	-0.017	26.504	21.652	494.555	100
68	1.6529	1.437	98.48	69.48	1.000	1.003	-0.014	26.473	21.645	504.48.021	
69	1.7052	1.482	98.59	69.54	1.000	1.001	-0.016	26.503	21.593	510.41.299	
70	2.0333	1.767	98.47	69.56	1.000	1.000	-0.017	26.470	21.580	516.26469	
71	2.3619	2.053	98.51	69.60	1.000	1.000	-0.008	26.479	21.543	521.2.532	
72	2.6898	2.338	98.43	69.61	1.000	1.000	-0.028	26.459	21.538	537.97.345	
73	3.0189	2.624	98.50	69.60	1.000	1.000	-0.008	26.479	21.543	538.4.299	
74	3.3477	2.910	98.48	69.62	1.000	1.000	-0.014	26.473	21.533	539.70.718	
75	3.6761	3.195	98.52	69.67	1.000	1.000	-0.003	26.484	21.491	555.6.424	
76	4.0052	3.481	98.62	69.64	1.000	1.000	-0.023	26.510	21.510	564.3.378	

Table 29.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 21. GRID NO. 1

BOUNDARY LAYER PROPERTIES

LINEAR INTERPOLATION	STANDARD SUBLAYER FUNCTION FROM TO WALL WALL TO $Y+=35$
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FREE STREAM VELOCITY =	98.700	98.700
FREE STREAM TEMPERATURE =	69.610	
WALL TEMPERATURE =	95.040	
WALL HEAT FLUX =	.07749	
FREE STREAM DENSITY =	.07641	
FREE STREAM KINEMATIC VISCOSITY =	.0001599	
DENSITY OF FLUID AT WALL =	.07290	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001737	
WALL/FREE STREAM DENSITY RATIO =	.95416	
LOCATION REYNOLDS NUMBER (REX) =	4325652.75	
INPUT VALUE OF VELOCITY DELTA =	1.35000	
INPUT VALUE OF TEMPERATURE DELTA =	1.35000	
CALCULATED DELTA =		1.21086
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.17647	.17649
MOMENTUM THICKNESS (THETA) =	.12424	.12446
ENERGY-DISSIPATION THICKNESS =	.22074	.22089
ENTHALPY THICKNESS =	.00629	.00629
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.42043	1.41801
SHAPE FACTOR 32 (ENERGY/THETA) =	1.77672	1.77482
MOMENTUM THICKNESS REYNOLDS NUMBER =	6390.26	6401.58
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	9076.89	9077.50
SKIN FRICTION COEFFICIENT =	.002713	
FRICTION VELOCITY =	3.72160	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.57251
CLAUSERS 'DELTA' INTEGRAL =	-4.33770	-4.51368
CLAUSERS 'G' INTEGRAL =	31.36304	31.20395
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.16687	.17019
MOMENTUM THICKNESS - CONSTANT DENSITY =	.12560	.12583
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.32864	1.35258

LOCATION -X- 84.10001

Z = CENTERLINE

Table 30.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 21. GRID NO. 1

REDUCED PROFILE DATA

	Y/ INCHES	U DELTA	T FT/SEC	DEG.F	U/UE	THETA	U-UE	U(+)	T(+)	Y(+)
1	.0066	.005	36.54	86.84	.370	.322	-16.701	9.819	6.887	11.834
2	.0076	.006	38.40	86.17	.389	.349	-16.2C4	10.317	7.451	13.619
3	.0088	.007	41.11	85.44	.417	.378	-15.474	11.047	8.070	15.761
4	.0099	.008	42.93	84.74	.435	.405	-14.986	11.535	8.655	17.725
5	.0109	.009	44.57	84.22	.452	.426	-14.545	11.975	9.094	19.510
6	.0142	.010	46.73	83.90	.473	.438	-13.963	12.557	9.363	22.366
7	.0151	.012	49.05	83.09	.491	.459	-13.497	13.024	9.807	25.400
8	.0172	.014	50.72	82.72	.497	.470	-13.340	13.181	10.040	27.007
9	.0190	.016	51.44	82.41	.514	.485	-12.892	13.629	10.356	30.755
10	.0210	.017	52.60	82.06	.533	.497	-12.699	13.822	10.615	33.968
11	.0224	.019	53.07	81.84	.538	.510	-12.387	14.133	10.908	37.538
12	.0242	.020	53.78	81.72	.545	.524	-12.069	14.261	11.092	40.037
13	.0256	.021	54.04	81.68	.547	.525	-12.001	14.451	11.195	43.250
14	.0280	.023	54.78	81.24	.555	.543	-11.803	14.519	11.223	45.749
15	.0297	.025	55.23	80.81	.560	.560	-11.681	14.648	11.598	50.033
16	.0314	.026	55.72	80.66	.565	.565	-11.548	14.973	12.081	53.102
17	.0377	.031	57.14	80.56	.579	.569	-11.167	15.354	12.169	56.137
18	.0447	.037	58.31	80.06	.591	.589	-10.853	15.668	12.592	57.842
19	.0517	.043	59.56	79.57	.604	.608	-10.512	16.009	12.996	92.337
20	.0577	.048	60.75	79.31	.615	.619	-10.198	16.323	13.218	103.047
21	.0645	.054	61.73	79.24	.625	.621	-9.933	16.588	13.280	115.899
22	.0718	.059	62.65	78.91	.635	.634	-9.688	16.833	13.553	128.215
23	.0779	.064	63.26	78.63	.641	.645	-9.523	16.998	13.793	139.103
24	.0846	.070	64.23	78.36	.651	.656	-9.261	17.260	14.014	151.063
25	.0916	.076	64.96	78.22	.658	.661	-9.067	17.454	14.131	163.558
26	.0982	.081	65.69	78.08	.666	.667	-8.870	17.651	14.249	175.338
27	.1052	.087	66.11	77.93	.670	.673	-8.756	17.765	14.377	187.833
28	.1121	.093	66.86	77.83	.677	.677	-8.554	17.966	14.460	200.150
29	.1178	.097	67.36	77.67	.682	.683	-8.421	18.100	14.596	210.324
30	.1248	.103	67.83	77.56	.687	.687	-8.295	18.226	14.689	222.819
31	.1321	.109	68.54	77.46	.694	.691	-8.104	18.417	14.777	235.849
32	.1487	.123	69.56	77.09	.705	.706	-7.824	18.697	15.082	265.480
33	.1665	.138	70.83	76.69	.718	.722	-7.489	19.031	15.418	297.253
34	.1838	.152	71.94	76.38	.729	.734	-7.192	19.329	16.683	328.133
35	.2020	.167	72.71	76.20	.737	.741	-6.982	19.538	15.832	360.619
36	.2186	.181	73.60	76.12	.746	.744	-6.746	19.775	15.897	390.260
37	.2368	.196	74.72	75.98	.757	.750	-6.445	20.076	16.020	422.737
38	.2538	.210	75.40	75.61	.764	.764	-6.261	20.260	16.327	453.081
39	.2716	.224	76.19	75.41	.772	.772	-6.049	20.472	16.498	484.854
40	.2891	.239	76.82	75.08	.778	.785	-5.878	20.643	16.776	516.091
41	.3072	.254	77.67	74.93	.787	.791	-5.650	20.870	16.901	548.399
42	.3584	.296	79.80	74.50	.809	.808	-5.078	21.443	17.257	639.790
43	.4098	.336	81.73	74.04	.828	.826	-4.561	21.960	17.647	731.538
44	.4622	.382	83.85	73.62	.850	.842	-3.989	22.532	18.001	825.071
45	.5137	.424	85.36	73.24	.865	.857	-3.585	22.935	18.321	916.997
46	.5656	.467	86.79	72.82	.879	.874	-3.201	23.320	18.671	1009.638
47	.6181	.510	88.46	72.42	.896	.890	-2.753	23.768	19.011	1103.349
48	.6695	.553	89.91	72.12	.911	.901	-2.361	24.559	19.260	1195.097
49	.7214	.596	91.39	71.81	.926	.913	-1.964	24.557	19.520	1287.737
50	.7732	.639	92.70	71.54	.939	.924	-1.613	24.708	19.750	1380.199
51	.8253	.682	93.21	71.19	.950	.938	-1.315	25.206	20.041	1473.197
52	.8768	.724	94.90	70.89	.962	.949	-1.020	25.500	20.290	1565.123
53	.9287	.767	95.79	70.60	.971	.961	-7.82	25.739	20.539	1657.763
54	.9811	.810	96.50	70.35	.978	.971	-5.902	25.931	20.748	1751.296
55	1.0324	.853	97.12	70.23	.984	.976	-4.233	26.097	21.052	1882.866
56	1.0836	.895	97.59	70.04	.989	.983	-2.999	26.222	21.011	1934.256
57	1.1360	.936	98.00	69.89	.993	.989	-1.87	26.334	21.134	2027.789
58	1.1882	.981	98.31	69.83	.996	.991	-1.06	26.415	21.185	2120.965
59	1.2401	1.024	98.44	69.75	.997	.995	-0.69	26.452	21.253	2213.606
60	1.2918	1.067	98.59	69.66	.999	.998	-0.029	26.491	21.326	2305.889
61	1.3436	1.110	98.73	69.64	1.000	1.000	-0.007	26.528	21.348	2398.351
62	1.3954	1.152	98.67	69.62	1.000	1.000	-0.007	26.514	21.366	2490.813
63	1.4471	1.195	98.72	69.63	1.000	1.000	-0.005	26.525	21.389	2583.096
64	1.4992	1.238	98.71	69.57	1.000	1.001	-0.003	26.523	21.399	2676.094
65	1.5509	1.281	98.76	69.59	1.000	1.001	-0.017	26.538	21.388	2768.377
66	1.6029	1.324	98.66	69.62	1.000	1.000	-0.010	26.510	21.358	2861.196
67	1.6552	1.367	98.73	69.65	1.000	1.000	-0.008	26.529	21.333	2954.550
68	1.7070	1.410	98.77	69.60	1.000	1.000	-0.012	26.509	21.403	3632.307
69	1.0349	1.461	98.65	69.57	1.000	1.000	-0.027	26.494	21.342	4219.029
70	2.3636	1.495	98.60	69.64	.999	.999	-0.034	26.486	21.323	4804.859
71	2.6918	2.223	98.57	69.66	.999	.998	-0.057	26.464	21.361	5392.831
72	3.0212	2.495	98.49	69.62	.998	.999	-0.037	26.484	21.342	5978.661
73	3.3494	2.766	98.56	69.64	.999	.998	-0.040	26.481	21.337	6565.027
74	3.6779	3.037	98.55	69.65	.998	.998	-0.025	26.496	21.318	7152.463
75	4.0070	3.309	98.61	69.67	.999	.998	-0.025	26.496	21.318	7152.463

Table 30.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 3. GRID NO. 2

BOUNDARY LAYER PROPERTIES

LINEAR	STANDARD
INTERPOLATION	SUBLAYER
TO WALL	FUNCTION FROM
	WALL TO $y^+=35$

FREE STREAM VELOCITY	=	99.054	99.054
FREE STREAM TEMPERATURE	=	68.469	
WALL TEMPERATURE	=	85.720	
WALL HEAT FLUX	=	.07878	
FREE STREAM DENSITY	=	.07612	
FREE STREAM KINEMATIC VISCOSITY	=	.0001602	
DENSITY OF FLUID AT WALL	=	.07371	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.0001696	
WALL/FREE STREAM DENSITY RATIO	=	.96837	
LOCATION REYNOLDS NUMBER (REX)	=	630497.87	
INPUT VALUE OF VELOCITY DELTA	=	.27500	
INPUT VALUE OF TEMPERATURE DELTA	=	.27500	
CALCULATED DELTA	=		.22989
DELTA 99.5% INPUT	=	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	=	.03039	.03036
MOMENTUM THICKNESS (θ)	=	.02047	.02075
ENERGY-DISSIPATION THICKNESS	=	.03663	.03689
ENTHALPY THICKNESS	=	.00089	.00089
SHAPE FACTOR 12 (DELSTAR/ θ)	=	1.48439	1.46321
SHAPE FACTOR 32 (ENERGY/ θ)	=	1.78905	1.77759
MOMENTUM THICKNESS REYNOLDS NUMBER	=	1054.57	1068.95
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	1565.39	1564.10
SKIN FRICTION COEFFICIENT	=	.004522	
FRICTION VELOCITY	=	4.78608	
LAW OF THE WALL CONSTANT (K)	=	.41000	
LAW OF THE WALL CONSTANT (C)	=	5.00000	
WAKE STRENGTH	=		.07145
CLAUSERS 'DELTA' INTEGRAL	=	-.50645	-.60990
CLAUSERS 'G' INTEGRAL	=	3.79134	3.65445
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.02699	.02947
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.02065	.02094
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.30685	1.40748

LOCATION -X- 12.24000

Z = CENTERLINE

Table 31.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 3. GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y/ DEG	U FT/SEC	T DEG.F	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.005C	.022	46.20	79.26	.466	.374	-11.042	9.654	6.940	11.827
2	.0063	.028	51.13	78.42	.516	.423	-10.014	10.682	7.847	14.884
3	.0071	.031	54.07	78.07	.546	.444	-9.399	11.298	8.227	16.765
4	.0080	.035	56.75	77.67	.573	.467	-8.840	11.857	8.651	18.881
5	.0098	.043	61.17	76.88	.618	.512	-7.915	12.782	9.498	23.113
6	.0110	.048	62.46	76.56	.631	.531	-7.365	13.050	9.841	25.935
7	.0123	.054	63.80	76.23	.644	.550	-7.024	13.331	10.197	28.991
8	.0140	.061	65.44	75.86	.661	.572	-7.024	13.672	10.600	32.988
9	.0164	.071	66.96	75.48	.676	.593	-6.706	13.990	11.003	38.671
10	.0180	.076	67.70	75.24	.684	.607	-6.550	14.146	11.262	42.393
11	.0199	.087	68.74	74.99	.694	.622	-6.333	14.363	11.529	46.861
12	.0213	.093	69.28	74.85	.699	.630	-6.221	14.476	11.683	50.153
13	.0233	.101	70.05	74.70	.707	.639	-6.061	14.636	11.847	54.855
14	.0252	.110	71.01	74.53	.717	.648	-5.860	14.837	12.022	59.323
15	.0270	.118	71.54	74.36	.722	.659	-5.749	14.947	12.213	63.555
16	.0289	.126	71.98	74.16	.727	.670	-5.656	15.040	12.420	68.022
17	.0353	.154	74.01	73.77	.747	.692	-5.232	15.464	12.839	83.070
18	.0422	.184	76.10	73.34	.768	.718	-4.795	15.901	13.309	99.294
19	.0491	.214	78.13	72.96	.789	.740	-4.372	16.324	13.719	115.518
20	.0553	.241	79.44	72.69	.802	.755	-4.098	16.598	14.003	130.096
21	.0624	.272	81.50	72.31	.823	.777	-3.668	17.028	14.410	146.790
22	.0691	.301	82.74	72.05	.835	.792	-3.408	17.288	14.689	162.543
23	.0751	.327	84.05	71.77	.849	.809	-3.135	17.562	14.994	176.651
24	.0821	.357	85.54	71.59	.864	.819	-2.824	17.873	15.182	193.110
25	.0895	.389	86.94	71.22	.878	.841	-2.531	18.166	15.588	210.509
26	.0953	.415	88.01	71.05	.888	.850	-2.308	18.386	15.768	224.314
27	.1026	.446	89.26	70.80	.901	.865	-2.046	18.650	16.031	241.311
28	.1094	.476	90.27	70.60	.911	.876	-1.836	18.861	16.250	257.300
29	.1152	.501	91.19	70.37	.921	.890	-1.642	19.054	16.498	270.937
30	.1221	.531	92.08	70.25	.930	.897	-1.458	19.239	16.632	287.161
31	.1293	.563	93.05	70.15	.939	.903	-1.255	19.442	16.739	304.090
32	.1462	.636	94.87	69.66	.958	.931	-0.873	19.823	17.266	343.826
33	.1638	.713	96.30	69.32	.972	.951	-0.575	20.121	17.627	3805.209
34	.1810	.787	97.31	69.04	.982	.967	-0.364	20.333	17.928	4225.651
35	.1992	.867	98.07	68.82	.990	.980	-0.205	20.491	18.165	468.444
36	.2162	.941	98.59	68.71	.995	.986	-0.098	20.598	18.282	508.415
37	.2341	1.018	98.75	68.63	.997	.991	-0.065	20.632	18.368	550.503
38	.2512	1.093	98.91	68.54	.999	.996	-0.031	20.666	18.461	590.710
39	.2694	1.172	99.05	68.48	1.000	1.000	-0.012	20.695	18.532	633.503
40	.2862	1.245	99.03	68.47	1.000	1.000	-0.006	20.691	18.536	673.004
41	.3040	1.322	99.04	68.47	1.000	1.000	-0.003	20.694	18.545	714.857
42	.3339	1.453	99.09	68.47	1.000	1.000	-0.008	20.705	18.540	785.160
43	.3642	1.584	99.14	68.46	1.001	1.001	-0.018	20.714	18.552	856.403
44	.3941	1.714	99.02	68.45	1.000	1.001	-0.008	20.688	18.558	926.706
45	.4243	1.846	99.03	68.45	1.000	1.001	-0.006	20.690	18.560	997.715
46	.4541	1.975	99.00	68.45	.999	1.000	-0.012	20.684	18.557	1067.783
47	.4841	2.106	99.00	68.42	.999	1.000	-0.017	20.684	18.588	1138.321
48	.5140	2.236	98.97	68.45	.999	1.000	-0.013	20.684	18.563	1208.624
49	.5440	2.366	98.99	68.40	.999	1.000	-0.019	20.677	18.611	1279.162
50	.5744	2.499	98.96	68.42	.999	1.000	-0.017	20.679	18.591	1350.640
51	.6042	2.628	98.97	68.43	.999	1.002	-0.032	20.664	18.579	1420.708
52	.6804	3.497	98.90	68.44	.998	1.000	-0.032	20.665	18.568	1490.492
53	1.0042	4.368	98.90	68.44	.998	1.002	-0.049	20.647	18.545	2031.000
54	1.2040	5.237	98.82	68.46	.998	1.000	-0.047	20.649	18.569	2331.255
55	1.4040	6.107	98.83	68.44	.998	1.002	-0.053	20.643	18.568	3771.509
56	1.6040	6.977	98.80	68.44	.997	1.002	-0.057	20.639	18.568	4242.468
57	1.8040	7.849	98.78	68.45	.997	1.001	-0.091	20.606	18.623	4712.017
58	2.0040	8.717	98.62	68.39	.996	1.004	-0.080	20.616	18.563	5182.977
59	2.2040	9.588	98.67	68.45	.996	1.001	-0.089	20.603	18.575	5652.995
60	2.4042	10.458	98.61	68.44	.995	1.002	-0.089	20.608	18.575	6122.779
61	2.6040	11.327	98.63	68.44	.996	1.002	-0.089	20.608	18.575	

Table 31.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 4. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION	STANDARD SUBLAYER FUNCTION FROM TO WALL WALL TO Y+=35
FREE STREAM VELOCITY	98.341	98.341
FREE STREAM TEMPERATURE	68.480	
WALL TEMPERATURE	85.320	
WALL HEAT FLUX	.07820	
FREE STREAM DENSITY	.07710	
FREE STREAM KINEMATIC VISCOSITY	.0001582	
DENSITY OF FLUID AT WALL	.07472	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001673	
WALL/FREE STREAM DENSITY RATIO	.96910	
LOCATION REYNOLDS NUMBER (REX)	633986.73	
INPUT VALUE OF VELOCITY DELTA	.27500	
INPUT VALUE OF TEMPERATURE DELTA	.31000	
CALCULATED DELTA		.22893
DISPLACEMENT THICKNESS (DELSTAR)	.00000	
MOMENTUM THICKNESS (THETA)	.03026	.03019
ENERGY-DISSIPATION THICKNESS	.02030	.02064
ENTHALPY THICKNESS	.03637	.03670
SHAPE FACTOR 12 (DELSTAR/THETA)	.00068	.00069
SHAPE FACTOR 32 (ENERGY/THETA)	1.49041	1.46229
MOMENTUM THICKNESS REYNOLDS NUMBER	1.79116	1.77780
DISPLACEMENT THICKNESS REYNOLDS NUMBER	1051.65	1069.30
SKIN FRICTION COEFFICIENT	1567.39	1563.63
FRICITION VELOCITY	.004526	
LAW OF THE WALL CONSTANT (K)	4.75208	
LAW OF THE WALL CONSTANT (C)	.41000	
WAKE STRENGTH	5.00000	.06966
CLAUSERS 'DELTA' INTEGRAL	-.49354	-.63633
CLAUSERS 'G' INTEGRAL	3.81335	3.67873
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.02661	.02730
MOMENTUM THICKNESS - CONSTANT DENSITY	.02047	.02033
SHAPE FACTOR 12 - CONSTANT DENSITY	1.29985	1.40687

LOCATION -X- 12.24000

Z = CENTER 'E'

Table 32.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 4. GRID NO. 2

REDUCED PROFILE DATA

N	Y/ INCHES	Y/ FT/SEC	T DEG.F	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0055	48.53	78.61	.493	.398	-10.483	10.212	7.311	13.093
2	.0071	53.84	77.68	.547	.454	-9.359	11.330	8.324	16.881
3	.0077	55.62	77.43	.566	.469	-8.990	11.704	8.603	18.302
4	.0087	58.13	77.07	.591	.490	-8.462	12.233	8.994	20.670
5	.0103	61.40	76.56	.624	.520	-7.773	12.921	9.543	24.458
6	.0119	63.30	76.14	.644	.545	-7.374	13.530	10.004	28.246
7	.0129	64.30	75.95	.654	.557	-7.164	13.530	10.214	30.614
8	.0145	65.20	75.67	.663	.573	-6.973	13.721	10.513	34.402
9	.0169	66.89	75.21	.680	.600	-6.619	14.075	11.318	40.085
10	.0185	67.62	74.92	.688	.618	-6.465	14.229	11.332	43.873
11	.0204	68.52	74.87	.698	.620	-6.255	14.439	11.384	48.371
12	.0221	69.24	74.67	.704	.632	-6.123	14.571	11.606	52.396
13	.0241	70.01	74.48	.712	.644	-5.963	14.732	11.812	57.132
14	.0259	70.61	74.34	.718	.652	-5.836	14.858	11.965	61.393
15	.0261	71.48	74.17	.727	.662	-5.652	15.043	12.147	66.602
16	.0294	71.79	74.07	.730	.668	-5.587	15.108	12.254	69.680
17	.0355	73.74	73.66	.750	.693	-5.176	15.518	12.710	84.123
18	.0429	75.86	73.19	.771	.720	-4.731	15.963	13.213	101.644
19	.0501	77.84	72.83	.792	.742	-4.314	16.380	13.615	118.691
20	.0560	79.16	72.62	.807	.754	-3.990	16.705	13.844	132.660
21	.0626	80.90	72.23	.823	.777	-3.671	17.023	14.263	148.760
22	.0697	82.43	71.95	.838	.794	-3.349	17.345	14.571	165.097
23	.0759	83.66	71.76	.851	.805	-3.090	17.605	14.781	179.777
24	.0829	85.10	71.55	.865	.818	-2.786	17.908	15.004	196.350
25	.0901	86.42	71.19	.879	.839	-2.509	18.185	15.399	213.397
26	.0955	87.46	71.07	.889	.846	-2.290	18.405	15.526	226.183
27	.1025	88.61	70.88	.901	.858	-2.047	18.647	15.737	242.756
28	.1099	89.80	70.59	.913	.875	-1.798	18.896	16.051	260.277
29	.1157	90.65	70.46	.922	.883	-1.618	19.077	16.196	274.009
30	.1225	91.61	70.27	.932	.894	-1.416	19.278	16.399	290.110
31	.1295	92.45	70.06	.940	.906	-1.241	19.454	16.631	306.683
32	.1465	94.33	69.63	.959	.932	-0.844	19.851	17.098	346.933
33	.1643	95.71	69.29	.973	.952	-0.555	20.140	17.464	389.078
34	.1818	96.71	69.07	.983	.965	-0.344	20.351	17.704	430.512
35	.1995	97.42	68.93	.991	.973	-0.193	20.501	17.859	472.419
36	.2165	97.87	68.74	.995	.985	-0.099	20.595	18.069	512.670
37	.2346	98.09	68.64	.997	.990	-0.052	20.642	18.172	555.524
38	.2521	98.20	68.57	.999	.995	-0.030	20.665	18.253	596.958
39	.2699	98.30	68.54	1.000	.997	-0.018	20.686	18.288	639.103
40	.2865	98.27	68.50	.999	.999	-0.014	20.680	18.323	678.406
41	.3049	98.35	68.50	1.000	.999	-0.002	20.696	18.330	721.971
42	.3343	98.40	68.50	1.001	.999	-0.013	20.707	18.326	791.580
43	.3645	98.31	68.48	1.000	1.000	-0.006	20.689	18.355	863.084
44	.3947	98.27	68.46	.999	1.001	-0.015	20.680	18.371	934.587
45	.4247	98.41	68.50	1.001	.999	-0.015	20.709	18.323	1005.617
46	.4551	98.32	68.48	1.000	1.000	-0.014	20.691	18.346	1077.594
47	.4845	98.39	68.47	1.001	1.000	-0.011	20.705	18.357	1147.203
48	.5146	98.26	68.49	.999	1.000	-0.014	20.681	18.335	1218.469
49	.5452	98.33	68.49	1.000	1.000	-0.012	20.693	18.344	1290.920
50	.5745	98.33	68.48	1.000	1.000	-0.002	20.693	18.355	1360.292
51	.6045	98.24	68.48	.999	1.000	-0.021	20.674	18.354	1431.322
52	.6350	98.25	68.53	.999	.997	-0.019	20.675	18.293	1906.038
53	1.0045	98.16	68.52	.998	.998	-0.039	20.655	18.311	2378.387
54	1.2045	98.14	68.52	.998	.998	-0.043	20.652	18.311	2851.919
55	1.4045	98.09	68.54	.997	.996	-0.052	20.642	18.281	3325.451
56	1.6045	98.12	68.54	.998	.997	-0.046	20.646	18.287	3798.984
57	1.8045	98.09	68.53	.997	.997	-0.053	20.641	18.299	4272.516
58	2.0045	98.03	68.54	.997	.996	-0.065	20.629	18.281	4746.048
59	2.2045	97.94	68.54	.996	.996	-0.064	20.610	18.286	5219.580
60	2.4045	97.90	68.56	.996	.995	-0.093	20.602	18.262	5693.112
61	2.6045	97.88	68.54	.995	.997	-0.096	20.598	18.287	6166.645

Table 32.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 5. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	SUBLAYER FUNCTION FROM WALL TO $Y^+=35$	STANDARD
FREE STREAM VELOCITY	= 98.151		98.151
FREE STREAM TEMPERATURE	= 68.480		
WALL TEMPERATURE	= 85.340		
WALL HEAT FLUX	= .07806		
FREE STREAM DENSITY	= .07710		
FREE STREAM KINEMATIC VISCOSITY	= .0001582		
DENSITY OF FLUID AT WALL	= .07471		
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001673		
WALL/FREE STREAM DENSITY RATIO	= .96907		
LOCATION REYNOLDS NUMBER (REX)	= 632760.20		
INPUT VALUE OF VELOCITY DELTA	= .27500		
INPUT VALUE OF TEMPERATURE DELTA	= .27500		
CALCULATED DELTA			.23153
DELTA 99.5% INPUT	= .00000		
DISPLACEMENT THICKNESS (DELSTAR)	= .03150		.03139
MOMENTUM THICKNESS (THETA)	= .02108		.02144
ENERGY-DISSIPATION THICKNESS	= .03769		.03805
ENTHALPY THICKNESS	= .00088		.00088
SHAPE FACTOR 12 (DELSTAR/THETA)	= 1.49415		1.46438
SHAPE FACTOR 32 (ENERGY/THETA)	= 1.78825		1.77474
MOMENTUM THICKNESS REYNOLDS NUMBER	= 1089.70		1108.23
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 1628.17		1622.86
SKIN FRICTION COEFFICIENT	= .04436		
FRICTION VELOCITY	= 4.69556		
LAW OF THE WALL CONSTANT (K)	= .41000		
LAW OF THE WALL CONSTANT (C)	= 5.00000		
WAKE STRENGTH			.11278
CLAUSERS 'DELTA' INTEGRAL	= -.51815		-.63770
CLAUSERS 'G' INTEGRAL	= 4.09256		3.88274
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .02770		.03051
MOMENTUM THICKNESS - CONSTANT DENSITY	= .02125		.02162
SHAPE FACTOR 12 - CONSTANT DENSITY	= 1.30358		1.41100
LOCATION -X-	12.24000		
Z = +6 INCHES			

Table 33.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79
 RUN NO. 7. POINT 5. GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y/	U	T	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0058	.025	49.86	78.30	.508	.417	-10.284	10.619	7.592	13.638
2	.0069	.030	52.11	77.75	.531	.450	-9.804	11.099	8.187	16.212
3	.0078	.034	54.49	77.31	.555	.477	-9.298	11.605	8.666	18.317
4	.0099	.039	57.55	76.89	.586	.501	-8.648	12.255	9.118	21.124
5	.0117	.043	59.40	76.57	.605	.520	-8.252	12.651	9.458	23.230
6	.0126	.051	61.80	76.02	.630	.553	-7.741	13.161	10.049	27.441
7	.0139	.056	62.83	75.77	.640	.568	-7.522	13.381	10.327	30.248
8	.0159	.060	63.87	75.62	.651	.576	-7.300	13.603	10.483	32.587
9	.0179	.069	65.29	75.29	.665	.596	-6.998	13.905	10.838	37.266
10	.0179	.077	66.41	75.06	.677	.610	-6.759	14.043	11.089	41.945
11	.0199	.086	67.31	74.78	.686	.627	-6.569	14.334	11.394	46.623
12	.0217	.094	68.22	74.57	.695	.639	-6.373	14.530	11.618	50.834
13	.0235	.102	68.72	74.48	.700	.644	-6.268	14.634	11.709	55.045
14	.0251	.109	69.41	74.34	.707	.652	-6.121	14.782	11.861	58.788
15	.0266	.116	70.12	74.18	.714	.662	-5.969	14.934	12.036	62.765
16	.0281	.126	70.77	74.02	.721	.671	-5.832	15.071	12.209	68.145
17	.0307	.133	71.41	73.93	.728	.677	-5.694	15.208	12.307	71.888
18	.0373	.161	73.36	73.54	.748	.700	-5.276	15.627	12.724	87.328
19	.0443	.191	75.40	73.09	.768	.727	-4.846	16.057	13.217	103.703
20	.0511	.221	77.01	72.71	.785	.749	-4.5C3	16.400	13.627	119.611
21	.0569	.246	78.59	72.44	.801	.765	-4.165	16.738	13.917	133.179
22	.0645	.279	80.34	72.09	.819	.786	-3.793	17.110	14.287	150.958
23	.0715	.309	81.94	71.91	.835	.796	-3.452	17.451	14.482	167.334
24	.0773	.334	83.06	71.73	.846	.807	-3.213	17.690	14.683	180.902
25	.0839	.362	84.50	71.44	.861	.824	-2.907	17.996	14.991	196.342
26	.0911	.394	85.84	71.15	.875	.842	-2.623	18.280	15.308	213.185
27	.0971	.420	86.97	70.97	.886	.852	-2.381	18.522	15.495	222.221
28	.1044	.451	88.06	70.82	.897	.861	-2.144	18.759	15.658	244.298
29	.1111	.480	89.24	70.65	.909	.871	-1.898	19.005	15.843	259.972
30	.1171	.506	90.02	70.37	.917	.888	-1.733	19.170	16.145	274.008
31	.1243	.537	90.88	70.19	.926	.898	-1.549	19.354	16.337	290.851
32	.1309	.565	91.81	70.09	.935	.905	-1.351	19.552	16.453	306.291
33	.1485	.642	93.85	69.71	.956	.927	-0.915	19.988	16.859	347.464
34	.1657	.716	95.36	69.40	.972	.945	-0.595	20.308	17.193	387.700
35	.1830	.791	96.42	69.16	.982	.960	-0.369	20.534	17.451	#28.171
36	.2009	.866	97.18	68.86	.990	.976	-0.206	20.697	17.751	470.045
37	.2178	.941	97.67	68.71	.995	.986	-0.101	20.801	17.939	509.580
38	.2361	1.020	97.84	68.65	.997	.990	-0.067	20.836	18.002	552.391
39	.2528	1.092	97.97	68.57	.998	.995	-0.038	20.865	18.092	591.458
40	.2712	1.171	98.13	68.50	1.000	.999	-0.005	20.898	18.164	634.502
41	.2879	1.244	98.20	68.50	1.000	.999	-0.010	20.913	18.159	673.569
42	.3061	1.322	98.13	68.49	1.000	.999	-0.004	20.899	18.172	716.145
43	.3356	1.450	98.12	68.44	1.000	1.002	-0.006	20.897	18.226	785.156
44	.3659	1.580	98.13	68.43	1.000	1.003	-0.005	20.898	18.241	856.038
45	.3961	1.711	98.12	68.44	1.000	1.002	-0.008	20.899	18.227	926.686
46	.4261	1.840	98.13	68.43	1.000	1.003	-0.012	20.891	18.225	996.867
47	.4559	1.969	98.09	68.44	.999	1.002	-0.012	20.891	18.226	1066.579
48	.4859	2.099	98.05	68.44	.999	1.002	-0.000	20.903	18.235	1136.760
49	.5162	2.230	98.15	68.43	1.000	1.003	-0.000	20.903	18.235	1207.642
50	.5465	2.360	98.07	68.42	.999	1.004	-0.016	20.887	18.250	1278.524
51	.5759	2.487	98.06	68.43	.999	1.003	-0.019	20.883	18.242	1347.301
52	.6062	2.618	98.03	68.44	.999	1.002	-0.026	20.877	18.230	1418.184
53	.8059	3.481	98.12	68.43	1.000	1.003	-0.007	20.896	18.238	1685.352
54	1.0059	4.345	97.97	68.40	.998	1.005	-0.039	20.864	18.268	2353.221
55	1.2065	5.211	97.94	68.41	.998	1.004	-0.045	20.857	18.256	2622.495
56	1.4056	6.072	97.87	68.40	.997	1.005	-0.060	20.843	18.268	3288.961
57	1.6061	6.937	97.83	68.39	.997	1.006	-0.067	20.836	18.286	3757.269
58	1.8065	7.802	97.86	68.39	.997	1.006	-0.058	20.845	18.287	4226.104
59	2.0063	8.665	97.85	68.34	.997	1.008	-0.065	20.838	18.334	4693.506
60	2.2059	9.528	97.71	68.36	.995	1.007	-0.094	20.809	18.310	5160.440
61	2.4059	10.391	97.83	68.36	.997	1.007	-0.068	20.835	18.317	5628.310
62	2.6063	11.257	97.81	68.32	.997	1.009	-0.073	20.830	18.353	6097.116

Table 33.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 6. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $y+=35$
FREE STREAM VELOCITY =	98.114	98.114
FREE STREAM TEMPERATURE =	68.668	
WALL TEMPERATURE =	85.470	
WALL HEAT FLUX =	.07836	
FREE STREAM DENSITY =	.07707	
FREE STREAM KINEMATIC VISCOSITY =	.0001583	
DENSITY OF FLUID AT WALL =	.07469	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001673	
WALL/FREE STREAM DENSITY RATIO =	.96918	
LOCATION REYNOLDS NUMBER (REX) =	632128.13	
INPUT VALUE OF VELOCITY DELTA =	.29000	
INPUT VALUE OF TEMPERATURE DELTA =	.29000	
CALCULATED DELTA =		.22176
DISPLACEMENT THICKNESS (DELSTAR) =	.00000	
MOMENTUM THICKNESS (THETA) =	.03000	.02940
ENERGY-DISSIPATION THICKNESS =	.01937	.02005
ENTHALPY THICKNESS =	.03481	.03562
SHAPE FACTOR 12 (DELSTAR/THETA) =	.00083	.00085
SHAPE FACTOR 32 (ENERGY/THETA) =	1.54932	1.46648
MOMENTUM THICKNESS REYNOLDS NUMBER =	1.79746	1.77636
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	1000.12	1035.49
SKIN FRICTION COEFFICIENT =	1549.50	1518.52
FRICTION VELOCITY =	.004558	
LAW OF THE WALL CONSTANT (K) =	4.75784	
LAW OF THE WALL CONSTANT (C) =	.41000	
WAKE STRENGTH =	5.00000	.07033
CLAUSERS 'DELTA' INTEGRAL =	-.42982	-.58883
CLAUSERS 'G' INTEGRAL =	4.10347	3.54145
MOMENTUM THICKNESS - CONSTANT DENSITY =	.02501	.02855
SHAPE FACTOR 12 - CONSTANT DENSITY =	.01952	.02023
	1.28092	1.41174

LOCATION -X- 12.24000

Z = -6 INCHES

Table 34.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 6. GRID NO. 2

REDUCED PROFILE DATA

N	INCHES	Y/	U	T	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0083	.036	57.21	77.21	.583	.492	-8.597	12.025	8.995	19.737
2	.0098	.044	59.17	76.79	.603	.516	-8.184	12.437	9.443	23.291
3	.0107	.048	60.47	76.58	.616	.529	-7.912	12.710	9.677	25.423
4	.0118	.053	61.95	76.31	.631	.545	-7.601	13.021	10.158	28.030
5	.0126	.057	62.83	76.14	.640	.555	-7.415	13.206	10.423	29.925
6	.0142	.064	64.36	75.89	.656	.570	-7.094	13.528	10.678	33.716
7	.0157	.071	65.46	75.66	.667	.584	-6.858	13.763	10.807	37.270
8	.0165	.075	65.94	75.54	.672	.591	-6.762	13.860	11.088	39.166
9	.0185	.084	67.14	75.28	.684	.606	-6.509	14.112	11.332	43.905
10	.0207	.093	68.26	75.06	.696	.620	-6.276	14.526	11.556	49.117
11	.0226	.102	69.11	74.85	.704	.632	-6.095	14.642	11.717	53.619
12	.0241	.109	69.66	74.71	.710	.641	-5.980	14.770	11.793	57.173
13	.0253	.114	70.27	74.64	.716	.645	-5.852	14.953	11.978	60.016
14	.0277	.125	71.15	74.47	.725	.655	-5.668	15.074	12.112	65.703
15	.0293	.132	71.72	74.34	.731	.662	-5.548	15.212	12.283	69.494
16	.0313	.141	72.38	74.19	.738	.672	-5.410	15.328	12.417	74.233
17	.0331	.149	72.93	74.06	.743	.679	-5.294	15.777	12.866	78.498
18	.0345	.178	75.07	73.65	.765	.703	-4.845	16.202	13.326	93.662
19	.0464	.209	77.08	73.23	.786	.729	-4.420	16.591	13.827	110.010
20	.0538	.243	78.94	72.77	.805	.756	-4.031	16.898	14.146	127.544
21	.0595	.268	80.40	72.47	.819	.773	-3.723	17.251	14.417	141.049
22	.0669	.302	82.06	72.23	.837	.788	-3.371	17.527	14.777	158.583
23	.0733	.331	83.79	71.89	.850	.808	-3.095	17.887	18.989	173.747
24	.0794	.358	84.63	71.70	.863	.820	-2.834	18.096	15.365	188.200
25	.0864	.390	86.10	71.35	.878	.840	-2.526	18.357	15.555	204.785
26	.0935	.422	87.34	71.18	.890	.851	-2.265	18.583	15.734	221.608
27	.0993	.448	88.41	71.02	.901	.860	-2.039	18.819	15.968	235.350
28	.1067	.481	89.54	70.80	.913	.873	-1.803	19.081	16.313	252.884
29	.1136	.512	90.78	70.48	.925	.892	-1.541	19.211	16.514	269.232
30	.1197	.540	91.40	70.30	.932	.903	-1.410	19.405	16.660	283.686
31	.1265	.571	92.33	70.16	.941	.911	-1.216	19.596	16.860	299.797
32	.1333	.601	93.24	69.98	.950	.922	-1.025	19.951	17.297	315.909
33	.1506	.679	94.93	69.58	.967	.946	-0.707	20.196	17.556	356.899
34	.1682	.759	96.09	69.34	.979	.960	-0.425	20.371	17.793	398.601
35	.1853	.836	96.92	69.12	.988	.973	-0.250	20.482	17.987	439.117
36	.2033	.917	97.45	68.94	.993	.984	-0.140	20.541	18.108	481.766
37	.2207	.995	97.73	68.83	.996	.987	-0.080	20.615	18.181	522.993
38	.2365	1.076	97.92	68.77	.998	.994	-0.041	20.615	18.224	565.168
39	.2555	1.152	98.08	68.73	1.000	.996	-0.007	20.624	18.251	648.333
40	.2736	1.234	98.12	68.70	1.000	.998	-0.002	20.631	18.262	688.139
41	.2904	1.310	98.16	68.69	1.000	.999	-0.010	20.615	18.299	730.550
42	.3083	1.390	98.09	68.66	1.000	1.001	-0.006	20.618	18.305	801.158
43	.3381	1.525	98.10	68.65	1.000	1.001	-0.003	20.629	18.324	873.187
44	.3685	1.662	98.15	68.66	1.000	1.001	-0.008	20.636	18.328	944.505
45	.3966	1.798	98.17	68.63	1.000	1.002	-0.011	20.633	18.341	1015.824
46	.4267	1.933	98.05	68.62	1.000	1.003	-0.014	20.608	18.324	1086.905
47	.4587	2.069	98.15	68.64	1.000	1.002	-0.007	20.625	18.320	1157.986
48	.4887	2.204	98.13	68.64	1.000	1.002	-0.003	20.618	18.316	1228.594
49	.5185	2.338	98.10	68.64	1.000	1.001	-0.004	20.605	18.312	1299.438
50	.5484	2.473	98.04	68.65	1.000	1.001	-0.016	20.636	18.324	1371.467
51	.5788	2.610	98.18	68.64	1.000	1.002	-0.014	20.607	18.304	1441.836
52	.6085	2.744	98.04	68.65	1.000	1.001	-0.015	20.599	18.266	1915.477
53	.8084	3.646	98.01	68.69	.999	.999	-0.022	20.598	18.308	2389.116
54	1.0083	4.547	98.00	68.65	.999	1.001	-0.023	20.596	18.288	2863.939
55	1.2087	5.451	97.99	68.67	.999	1.000	-0.026	20.604	18.272	3337.815
56	1.4087	6.353	98.03	68.68	.999	1.000	-0.018	20.566	18.296	3811.690
57	1.6087	7.254	97.85	68.66	.997	1.000	-0.056	20.555	18.282	4285.566
58	1.8087	8.156	97.80	68.67	.997	1.000	-0.066	20.560	18.259	4759.442
59	2.0087	9.058	97.82	68.70	.997	.998	-0.361	20.569	18.245	5233.318
60	2.2087	9.960	97.87	68.71	.997	.998	-0.352	20.553	18.203	5706.483
61	2.4084	10.861	97.79	68.75	.997	.995	-0.369	20.538	18.217	6181.069
62	2.6087	11.764	97.72	68.73	.996	.996	-0.084			

Table 34.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 8. GRID NO. 2

BOUNDARY LAYER PROPERTIES

STANDARD
LINEAR SUBLAYER
INTERPOLATION FUNCTION FROM
TO WALL WALL TO Y+=35

FREE STREAM VELOCITY	=	98.588	98.588
FREE STREAM TEMPERATURE	=	69.310	
WALL TEMPERATURE	=	89.660	
WALL HEAT FLUX	=	.07841	
FREE STREAM DENSITY	=	.07698	
FREE STREAM KINEMATIC VISCOSITY	=	.0001587	
DFNSITY OF FLUID AT WALL	=	.07412	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.0001696	
WALL/FREE STREAM DENSITY RATIO	=	.96296	
LOCATION REYNOLDS NUMBER (REX)	=	1459216.05	
INPUT VALUE OF VELOCITY DELTA	=	.62000	
INPUT VALUE OF TEMPERATURE DELTA	=	.90000	
CALCULATED DELTA	=		.49689
DELTA 99.5% INPUT	=	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	=	.07321	.07316
MOMENTUM THICKNESS (THETA)	=	.05062	.05095
ENERGY-DISSIPATION THICKNESS	=	.09002	.09030
ENTHALPY THICKNESS	=	.00218	.00219
SHAPE FACTOR 12 (DELSTAR/THETA)	=	1.44617	1.43597
SHAPE FACTOR 32 (ENERGY/THETA)	=	1.77822	1.77246
MOMENTUM THICKNESS REYNOLDS NUMBER	=	2621.46	2638.17
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	3791.08	3788.34
SKIN FRICTION COEFFICIENT	=	.003373	
FRICTION VELOCITY	=	4.12588	
LAW OF THE WALL CONSTANT (K)	=	.41000	
LAW OF THE WALL CONSTANT (C)	=	5.00000	
WAKE STRENGTH	=		.41599
CLAUSERS 'DELTA' INTEGRAL	=	-1.53912	-1.69607
CLAUSERS 'G' INTEGRAL	=	11.39228	11.16593
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.06773	.07098
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.05109	.05142
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.32566	1.38029

LOCATION -X- 28.18001

Z = CENTERLINE

Table 35.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 8. GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y/DELTA	U FT/SEC	T DEG.F	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0066	.013	43.17	81.73	.438	.390	-13.432	10.463	7.427	13.439
2	.0077	.016	45.32	81.02	.460	.425	-12.910	10.985	8.088	15.669
3	.0089	.018	48.17	80.48	.489	.451	-12.220	11.675	8.589	18.102
4	.0099	.020	50.26	80.28	.510	.461	-11.713	12.182	8.784	20.129
5	.0107	.022	51.76	80.02	.525	.474	-11.349	12.546	9.028	21.750
6	.0125	.025	54.02	79.43	.548	.503	-10.802	13.093	9.576	25.399
7	.0137	.026	55.16	79.31	.560	.509	-10.526	13.369	9.693	27.832
8	.0150	.030	55.98	79.00	.568	.524	-10.326	13.569	9.978	30.467
9	.0173	.035	57.66	78.56	.585	.546	-9.919	13.976	10.395	35.129
10	.0188	.038	58.45	78.28	.593	.559	-9.727	14.168	10.651	38.170
11	.0211	.043	59.42	78.10	.603	.568	-9.494	14.401	10.817	42.832
12	.0225	.045	60.06	77.99	.609	.573	-9.338	14.557	10.924	45.670
13	.0241	.049	60.63	77.81	.615	.582	-9.199	14.696	11.091	48.913
14	.0263	.053	61.13	77.57	.620	.594	-9.079	14.816	11.318	53.373
15	.0279	.056	61.74	77.42	.626	.601	-8.930	14.964	11.458	56.616
16	.0297	.060	62.20	77.27	.631	.609	-8.819	15.075	11.597	60.265
17	.0315	.063	62.80	77.14	.637	.615	-8.673	15.222	11.722	63.913
18	.0380	.077	64.37	76.74	.653	.635	-8.293	15.602	12.091	77.089
19	.0447	.090	65.91	76.41	.669	.651	-7.921	15.974	12.400	80.671
20	.0517	.104	67.22	76.07	.682	.668	-7.602	16.293	12.721	104.860
21	.0574	.117	68.38	75.76	.694	.683	-7.322	16.573	13.016	117.428
22	.0651	.131	69.33	75.52	.703	.695	-7.091	16.804	13.232	132.023
23	.0718	.145	70.67	75.38	.717	.702	-6.767	17.128	13.366	145.604
24	.0781	.157	71.50	75.12	.725	.714	-6.565	17.330	13.607	158.375
25	.0851	.171	72.46	74.89	.735	.726	-6.333	17.562	13.827	172.564
26	.0919	.185	73.46	74.78	.745	.731	-6.091	17.804	13.927	186.348
27	.0981	.197	74.43	74.57	.755	.742	-5.855	18.040	14.130	198.916
28	.1053	.212	75.09	74.36	.762	.752	-5.696	18.199	14.324	213.511
29	.1121	.226	75.82	74.21	.769	.759	-5.519	18.376	14.464	227.295
30	.1181	.238	76.78	74.10	.779	.764	-5.286	18.609	14.563	239.457
31	.1252	.252	77.46	73.96	.786	.772	-5.120	18.775	14.698	253.850
32	.1319	.266	78.21	73.82	.793	.778	-4.940	18.955	14.829	267.431
33	.1492	.300	80.08	73.45	.812	.796	-4.487	19.408	15.170	302.499
34	.1665	.335	81.79	73.10	.830	.814	-4.072	19.823	15.500	337.567
35	.1841	.371	83.47	72.76	.847	.830	-3.663	20.232	15.819	373.244
36	.2017	.406	84.98	72.45	.862	.846	-3.298	20.597	16.108	408.920
37	.219C	.441	86.31	72.12	.875	.862	-2.977	20.918	16.415	443.988
38	.237C	.477	87.81	71.81	.891	.877	-2.613	21.282	16.712	480.476
39	.2541	.511	88.97	71.58	.902	.889	-2.331	21.564	16.928	515.139
40	.2721	.548	90.14	71.29	.914	.903	-2.047	21.848	17.194	551.626
41	.2891	.582	91.51	71.03	.928	.916	-1.714	22.180	17.442	586.086
42	.3C71	.618	92.26	70.77	.936	.928	-1.535	22.360	17.684	622.573
43	.3365	.677	93.84	70.53	.952	.940	-1.150	22.745	17.910	682.169
44	.367C	.739	95.06	70.23	.964	.955	-0.851	23.044	18.192	743.994
45	.3968	.799	96.15	70.03	.975	.965	-0.592	23.303	18.377	804.401
46	.4269	.859	96.94	69.82	.983	.975	-0.398	23.497	18.572	865.416
47	.4567	.919	97.45	69.73	.989	.979	-0.275	23.620	18.654	925.822
48	.4869	.980	97.86	69.59	.993	.986	-0.176	23.719	18.791	987.040
49	.517C	1.041	98.12	69.48	.995	.991	-0.113	23.782	18.887	1048.054
50	.5467	1.100	98.35	69.47	.998	.992	-0.057	23.838	18.896	1108.258
51	.5767	1.161	98.43	69.43	.998	.994	-0.039	23.856	18.938	1169.070
52	.6071	1.222	98.50	69.37	.999	.997	-0.022	23.873	18.995	1230.693
53	.687C	1.624	98.59	69.30	1.000	1.000	0.001	23.896	19.053	1635.704
54	1.0C71	2.027	98.59	69.31	1.000	1.000	0.000	23.895	19.053	2041.520
55	1.2067	2.429	98.58	69.32	1.000	1.000	0.000	23.894	19.053	2456.123
56	1.4067	2.631	98.45	69.31	1.000	1.000	0.033	23.862	19.053	2851.536
57	1.6071	3.234	98.46	69.30	1.000	1.000	0.026	23.869	19.058	3257.760
58	1.8C70	3.637	98.41	69.31	1.000	1.000	0.043	23.852	19.053	3662.971
59	2.0067	4.039	98.40	69.32	1.000	1.000	0.046	23.849	19.036	4067.776
60	2.2071	4.442	98.39	69.36	1.000	1.000	0.047	23.848	19.006	4474.000
61	2.4073	4.845	98.36	69.36	1.000	1.000	0.055	23.840	19.006	4879.819
62	2.6067	5.246	98.35	69.39	1.000	1.000	0.057	23.838	18.973	5284.016

Table 35.

JCB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 9. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	SUBLAYER FUNCTION FROM WALL TO $\gamma+ = 35$	STANDARD
FREE STREAM VELOCITY	= 98.385		98.385
FREE STREAM TEMPERATURE	= 69.540		
WALL TEMPERATURE	= 89.900		
WALL HEAT FLUX	= .07775		
FREE STREAM DENSITY	= .0001568		
KINEMATIC VISCOSITY	= .07409		
DENSITY OF FLUID AT WALL	= .0001697		
KINEMATIC VISCOSITY OF FLUID AT WALL	= .96295		
WALL/FREE STREAM DENSITY RATIO	= 1455089.11		
LOCATION REYNOLDS NUMBER (REX)	= .70000		
INPUT VALUE OF VELOCITY DELTA	= .90000		
INPUT VALUE OF TEMPERATURE DELTA			.50677
CALCULATED DELTA			
DELTA 99.5% INPUT	= .00000		
DISPLACEMENT THICKNESS (DELSTAR)	= .07513		.07505
MOMENTUM THICKNESS (THETA)	= .05192		.05230
ENERGY-DISSIPATION THICKNESS	= .09231		.09265
ENTHALPY THICKNESS	= .00215		.00216
SHAPE FACTOR 12 (DELSTAR/THETA)	= 1.44690		1.43501
SHAPE FACTOR 32 (ENERGY/THETA)	= 1.77762		1.77136
MOMENTUM THICKNESS REYNOLDS NUMBER	= 2681.04		2700.64
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 3879.19		3875.46
SKIN FRICTION COEFFICIENT	= .003344		
FRICTION VELOCITY	= 4.09944		
LAW OF THE WALL CONSTANT (K)	= .41000		
LAW OF THE WALL CONSTANT (C)	= 5.00000		.43118
WAKE STRENGTH			
CLAUSERS 'DELTA' INTEGRAL	= -1.57831		-1.74985
CLAUSERS 'G' INTEGRAL	= 11.87387		11.59972
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .06938		.07291
MOMENTUM THICKNESS - CONSTANT DENSITY	= .05238		.05277
SHAPE FACTOR 12 - CONSTANT DENSITY	= 1.32456		1.38162

LOCATION -X- 28.18001

Z = +6 INCHES

Table 36.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 9. GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y/ INCHES	U FT/SEC	T DEG.F	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0072	.014	45.24	81.53	.460	.411	-12.964	11.035	7.851	14.551
2	.0065	.017	47.06	80.83	.478	.445	-12.520	11.479	8.503	17.167
3	.0093	.018	48.65	80.52	.494	.461	-12.133	11.867	8.798	18.777
4	.0107	.021	51.04	80.06	.519	.483	-11.548	12.452	9.228	21.594
5	.0114	.023	52.24	79.81	.531	.496	-11.256	12.744	9.459	23.003
6	.0130	.026	54.11	79.21	.550	.525	-10.800	13.200	10.020	26.223
7	.0144	.028	55.39	78.95	.563	.538	-10.487	13.512	10.263	29.041
8	.0152	.030	55.89	78.85	.568	.543	-10.366	13.633	10.360	30.651
9	.0176	.035	57.39	78.57	.583	.556	-10.001	13.998	10.619	35.481
10	.0198	.039	58.41	78.08	.594	.580	-9.751	14.248	11.081	39.908
11	.0215	.042	59.18	77.99	.602	.585	-9.564	14.436	11.169	43.330
12	.0231	.046	59.80	77.92	.606	.588	-9.413	14.586	11.231	46.550
13	.0244	.048	60.23	77.76	.612	.596	-9.307	14.693	11.378	49.166
14	.0267	.053	60.98	77.38	.620	.615	-9.125	14.875	11.740	53.795
15	.0282	.056	61.27	77.24	.623	.622	-9.053	14.947	11.866	56.814
16	.0306	.060	62.07	77.14	.631	.627	-8.858	15.142	11.962	61.644
17	.0320	.063	62.36	77.12	.634	.628	-8.787	15.213	11.986	64.461
18	.0344	.076	63.94	76.74	.650	.646	-8.401	15.598	12.339	77.341
19	.0456	.090	65.52	76.36	.666	.665	-8.017	15.982	12.698	91.831
20	.0524	.103	66.73	76.20	.678	.673	-7.721	16.279	12.841	105.517
21	.0566	.116	67.82	75.81	.689	.692	-7.457	16.543	13.207	117.994
22	.0692	.124	69.01	75.65	.701	.700	-7.166	16.833	13.361	131.277
23	.C723	.143	70.23	75.27	.714	.719	-6.867	17.132	13.720	145.566
24	.0786	.155	71.06	75.15	.722	.724	-6.662	17.358	13.829	158.245
25	.0856	.169	72.11	74.94	.733	.735	-6.408	17.591	14.022	172.332
26	.0922	.182	73.53	74.74	.742	.744	-6.184	17.815	14.210	185.615
27	.0962	.194	73.67	74.60	.749	.751	-6.030	17.970	14.344	197.690
28	.1052	.208	74.71	74.32	.759	.765	-5.774	18.225	14.605	211.778
29	.1124	.222	75.36	74.34	.766	.764	-5.617	18.383	14.590	226.268
30	.1184	.234	76.13	74.08	.774	.777	-5.429	18.570	14.831	238.343
31	.1256	.248	76.99	73.97	.783	.782	-5.218	18.781	14.932	252.833
32	.1324	.261	77.49	73.87	.788	.787	-5.096	18.903	15.027	266.519
33	.1494	.295	79.32	73.49	.806	.806	-4.651	19.349	15.387	300.732
34	.1670	.330	81.20	73.11	.825	.824	-4.192	19.808	15.738	336.152
35	.1846	.364	82.80	72.89	.842	.836	-3.801	20.199	15.950	371.572
36	.2024	.399	84.49	72.60	.859	.850	-3.388	20.611	16.219	407.395
37	.2194	.433	85.82	72.32	.872	.863	-3.066	20.934	16.484	441.608
38	.2376	.469	87.11	72.02	.885	.878	-2.755	21.249	16.763	478.236
39	.2542	.502	88.27	71.83	.897	.888	-2.467	21.533	16.947	511.644
40	.2726	.538	89.54	71.61	.910	.898	-2.156	21.843	17.150	548.675
41	.2893	.571	90.68	71.36	.922	.911	-1.879	22.121	17.384	562.284
42	.3074	.607	91.77	71.22	.933	.918	-1.614	22.385	17.516	618.710
43	.3370	.665	93.37	70.82	.949	.937	-1.224	22.775	17.894	678.281
44	.3674	.725	94.44	70.56	.960	.950	-0.963	23.036	18.135	739.462
45	.3973	.784	95.74	70.24	.973	.966	-0.646	23.354	18.434	799.636
46	.4274	.843	96.53	70.09	.981	.973	-0.451	23.548	18.574	860.213
47	.4573	.902	97.12	69.97	.987	.979	-0.208	23.691	18.690	920.388
48	.4876	.962	97.54	69.80	.991	.987	-0.06	23.794	18.843	981.367
49	.5176	1.021	97.85	69.77	.995	.989	-0.130	23.870	18.875	1041.743
50	.5472	1.080	98.12	69.69	.997	.992	-0.065	23.935	18.945	1101.314
51	.5773	1.139	98.20	69.63	.998	.996	-0.046	23.954	19.007	1161.891
52	.6074	1.199	98.27	69.60	.999	.997	-0.027	23.973	19.029	1222.468
53	.8075	1.593	98.48	69.55	1.001	1.000	-0.023	24.023	19.083	1625.174
54	1.0076	1.988	98.38	69.55	1.000	1.000	-0.021	23.999	19.082	2027.880
55	1.2074	2.383	98.29	69.55	0.999	0.999	-0.022	23.977	19.078	2429.982
56	1.4074	2.777	98.25	69.52	0.999	1.001	-0.032	23.967	19.109	2832.487
57	1.6076	3.172	98.27	69.51	0.999	1.002	-0.029	23.971	19.119	3235.395
58	1.8074	3.567	98.22	69.52	0.998	1.001	-0.040	23.959	19.109	3637.497
59	2.0075	3.961	98.26	69.49	0.999	1.002	-0.030	23.969	19.135	4040.203
60	2.2076	4.356	98.19	69.49	0.998	1.003	-0.047	23.952	19.139	4442.909
61	2.4073	4.750	98.22	69.51	0.998	1.001	-0.041	23.959	19.113	4844.810
62	2.6074	5.145	98.14	69.50	0.997	1.002	-0.061	23.939	19.125	5247.517

Table 36.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 1D. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	SUBLAYER FUNCTION FROM WALL TO $Y+ = 35$	STANDARD
FREE STREAM VELOCITY	= 98.438		98.438
FREE STREAM TEMPERATURE	= 69.598		
WALL TEMPERATURE	= 90.390		
WALL HEAT FLUX	= .07823		
FREE STREAM DENSITY	= .07693		
FREE STREAM KINEMATIC VISCOSITY	= .0001568		
DENSITY OF FLUID AT WALL	= .07403		
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001700		
WALL/FREE STREAM DENSITY RATIO	= .96220		
LOCATION REYNOLDS NUMBER (REX)	= 1455592.22		
INPUT VALUE OF VELOCITY DELTA	= .70000		
INPUT VALUE OF TEMPERATURE DELTA	= .90000		
CALCULATED DELTA	=		.49373
DELTA 99.5% INPUT	= .00000		
DISPLACEMENT THICKNESS (DELSTAR)	= .07254		.07237
MOMENTUM THICKNESS (THE TAI)	= .04995		.05039
ENERGY-DISSIPATION THICKNESS	= .08890		.08932
ENTHALPY THICKNESS	= .00214		.00215
SHAPE FACTOR 12 (DELSTAR/THE TAI)	= 1.45213		1.43613
SHAPE FACTOR 32 (ENERGY/THE TAI)	= 1.77960		1.77253
MOMENTUM THICKNESS REYNOLDS NUMBER	= 2580.33		2602.88
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 3746.97		3738.08
SKIN FRICTION COEFFICIENT	= .003391		
FRICTION VELOCITY	= 4.13188		
LAW OF THE WALL CONSTANT (K)	= .41000		
LAW OF THE WALL CONSTANT (C)	= 5.00000		.40508
WAKE STRENGTH	=		
CLAUSERS 'DELTA' INTEGRAL	= -1.49559		-1.67295
CLAUSERS 'G' INTEGRAL	= 11.34975		10.98743
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .06659		.07022
MOMENTUM THICKNESS - CONSTANT DENSITY	= .05041		.05086
SHAPE FACTOR 12 - CONSTANT DENSITY	= 1.32100		1.38060

LOCATION -X- 28.18001

Z = -6 INCHES

Table 37.

JOB KLD72 TAPE 3166R- FILES 93-316, RUNS 7.01-7.24 04/03/79
 RUN NO. 7. POINT 10. GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y'	U	T	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0076	.015	45.46	81.85	.462	.411	-12.821	11.003	8.017	15.453
2	.0087	.018	48.11	81.23	.489	.440	-12.181	11.643	8.594	17.681
3	.0102	.021	51.16	80.67	.520	.468	-11.442	12.382	9.124	20.718
4	.0111	.023	52.41	80.38	.532	.481	-11.139	12.685	9.394	22.541
5	.0118	.024	53.41	80.12	.543	.494	-10.897	12.362	9.634	23.959
6	.0135	.027	55.23	79.56	.561	.521	-10.458	13.366	10.162	27.402
7	.0149	.030	56.04	79.27	.569	.535	-10.262	13.562	10.437	30.237
8	.0152	.032	56.85	79.17	.578	.540	-10.064	13.760	10.526	32.060
9	.0177	.036	57.64	78.78	.586	.558	-9.873	13.951	10.892	35.908
10	.0196	.040	58.63	78.47	.598	.573	-9.587	14.237	11.183	39.756
11	.0219	.044	59.64	78.31	.606	.581	-9.390	14.434	11.332	44.414
12	.0234	.047	60.14	78.09	.611	.591	-9.269	14.555	11.537	47.452
13	.0249	.050	60.73	77.96	.617	.598	-9.127	14.697	11.667	50.490
14	.0271	.055	61.26	77.70	.623	.610	-8.992	14.832	11.905	54.945
15	.0289	.059	61.80	77.51	.628	.619	-8.868	14.956	12.085	58.591
16	.0309	.063	62.53	77.35	.635	.627	-8.691	15.133	12.234	62.641
17	.0325	.066	62.98	77.25	.640	.632	-8.582	15.242	12.326	65.882
18	.0387	.078	64.45	76.80	.655	.654	-8.226	15.598	12.750	78.438
19	.0459	.093	66.17	76.57	.672	.665	-7.810	16.014	12.973	93.020
20	.0528	.107	67.41	76.25	.685	.680	-7.509	16.315	13.270	106.995
21	.0589	.119	68.36	76.04	.695	.690	-7.273	16.551	13.467	119.349
22	.0659	.134	69.64	75.73	.707	.705	-6.971	16.853	13.754	133.525
23	.0727	.147	70.90	75.49	.720	.717	-6.664	17.160	13.986	147.297
24	.0769	.160	71.81	75.37	.730	.722	-6.444	17.380	14.080	159.854
25	.0857	.174	72.79	75.14	.739	.733	-6.206	17.618	14.308	173.626
26	.0929	.188	73.79	74.94	.750	.743	-5.965	17.859	14.499	188.208
27	.0991	.201	74.49	74.77	.757	.751	-5.795	18.029	14.655	200.764
28	.1057	.214	75.36	74.68	.766	.755	-5.586	18.238	14.739	214.131
29	.1127	.228	76.04	74.50	.772	.764	-5.321	18.403	14.912	228.308
30	.1187	.240	76.80	74.33	.780	.772	-5.023	18.587	15.068	240.459
31	.1261	.255	77.63	74.16	.789	.781	-5.036	18.788	15.233	255.446
32	.1327	.269	78.35	73.97	.796	.790	-4.862	18.962	15.406	268.813
33	.1497	.303	80.20	73.51	.815	.812	-4.413	19.411	15.839	303.242
34	.1675	.339	82.06	73.27	.834	.824	-3.963	19.861	16.067	339.292
35	.1849	.375	83.62	73.02	.849	.835	-3.567	20.237	16.297	374.532
36	.2029	.411	85.10	72.67	.864	.852	-3.229	20.595	16.630	410.986
37	.2199	.445	86.45	72.41	.878	.865	-2.962	20.922	16.869	445.416
38	.2383	.483	87.78	72.16	.892	.877	-2.680	21.244	17.105	482.681
39	.2547	.516	89.08	71.86	.905	.891	-2.465	21.559	17.388	515.895
40	.2727	.552	90.22	71.63	.917	.902	-1.988	21.836	17.606	552.350
41	.2900	.587	91.33	71.43	.928	.912	-1.719	22.105	17.791	587.387
42	.3078	.623	92.31	71.09	.938	.928	-1.483	22.341	18.109	623.436
43	.3375	.684	93.93	70.75	.954	.944	-1.091	22.733	18.426	683.586
44	.3679	.745	95.22	70.45	.967	.959	-0.779	23.045	18.707	745.154
45	.3978	.806	96.15	70.32	.977	.965	-0.554	23.270	18.833	805.710
46	.4279	.867	96.87	70.01	.984	.980	-0.380	23.444	19.124	866.670
47	.4561	.926	97.46	69.92	.990	.984	-0.236	23.588	19.206	927.833
48	.4860	.986	97.78	69.79	.993	.991	-0.159	23.665	19.328	988.388
49	.5177	1.049	98.08	69.78	.996	.991	-0.087	23.737	19.339	1048.539
50	.5477	1.109	98.21	69.71	.998	.995	-0.056	23.768	19.406	1109.296
51	.5780	1.171	98.30	69.63	.999	.999	-0.034	23.790	19.483	1170.662
52	.6079	1.231	98.37	69.64	.999	.998	-0.016	23.808	19.467	1231.217
53	.6877	1.636	98.50	69.59	1.001	1.001	-0.015	23.839	19.522	1635.864
54	1.0077	2.041	98.41	69.60	1.000	1.000	-0.008	23.816	19.501	2040.917
55	1.2077	2.446	98.41	69.59	1.000	1.001	-0.007	23.817	19.521	2445.969
56	1.4077	2.851	98.40	69.60	1.000	1.000	-0.010	23.814	19.501	2851.021
57	1.6076	3.257	98.39	69.64	1.000	1.000	-0.012	23.812	19.466	3256.276
58	1.8077	3.661	98.41	69.61	1.000	1.000	-0.006	23.818	19.500	3661.126
59	2.0079	4.067	98.40	69.64	1.000	1.000	-0.008	23.816	19.473	4066.583
60	2.2077	4.472	98.29	69.64	1.000	1.000	-0.036	23.788	19.469	4471.230
61	2.4080	4.877	98.29	69.63	1.000	1.000	-0.035	23.789	19.479	4876.890
62	2.6079	5.282	98.22	69.67	1.000	1.000	-0.053	23.771	19.447	5281.740

Table 37.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 11. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+ = 35
FREE STREAM VELOCITY =	98.483	98.483
FREE STREAM TEMPERATURE =	70.230	
WALL TEMPERATURE =	91.450	
WALL HEAT FLUX =	.07769	
FREE STREAM DENSITY =	.07684	
FREE STREAM KINEMATIC VISCOSITY =	.0001591	
DENSITY OF FLUID AT WALL =	.07388	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001706	
WALL/FREE STREAM DENSITY RATIO =	.96150	
LOCATION REYNOLDS NUMBER (REX) =	1862625.37	
INPUT VALUE OF VELOCITY DELTA =	.73000	
INPUT VALUE OF TEMPERATURE DELTA =	.83000	
CALCULATED DELTA =		.62409
DISPLACEMENT THICKNESS (DELSTAR) =	.09265	.09248
MOMENTUM THICKNESS (THETA) =	.06426	.06469
ENERGY-DISSIPATION THICKNESS =	.11425	.11466
ENTHALPY THICKNESS =	.00279	.00280
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.44172	1.42950
SHAPE FACTOR 32 (ENERGY/THETA) =	1.77790	1.77236
MOMENTUM THICKNESS REYNOLDS NUMBER =	3313.84	3336.01
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	4777.64	4768.82
SKIN FRICTION COEFFICIENT =	.003165	
FRICTION VELOCITY =	3.99532	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.47565
CLAUSERS 'DELTA' INTEGRAL =	-2.01982	-2.21076
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	15.20041	14.81751
MOMENTUM THICKNESS - CONSTANT DENSITY =	.08591	.08969
SHAPE FACTOR 12 - CONSTANT DENSITY =	.06485	.06530
	1.32461	1.37346

LOCATION -X- 36.12000

Z = CENTERLINE

Table 38.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 11. GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELT A	U FT/SEC	T DEG.F	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0079	.013	44.06	82.68	.447	.413	-13.620	11.029	7.995	15.477
2	.0095	.015	47.50	81.92	.482	.449	-12.760	11.890	8.692	18.600
3	.0103	.017	49.22	81.81	.500	.454	-12.331	12.316	8.791	20.161
4	.0114	.018	50.46	81.58	.512	.465	-12.019	12.630	9.002	22.308
5	.0123	.020	51.72	81.23	.525	.482	-11.705	12.945	9.319	24.064
6	.0138	.022	53.10	80.86	.539	.499	-11.360	13.289	9.653	26.992
7	.0149	.024	53.72	80.68	.545	.508	-11.205	13.445	9.821	29.139
8	.0163	.026	54.91	80.40	.558	.521	-10.907	13.743	10.080	31.871
9	.0184	.028	55.92	79.97	.568	.541	-10.653	13.997	10.464	35.970
10	.0203	.030	56.86	79.87	.577	.546	-10.417	14.232	10.562	39.678
11	.0221	.033	57.47	79.63	.584	.557	-10.264	14.385	10.775	43.191
12	.0237	.038	58.13	79.46	.590	.565	-10.100	14.550	10.929	46.313
13	.0251	.040	58.49	79.30	.594	.573	-10.011	14.638	11.082	49.046
14	.0275	.044	59.37	78.97	.603	.588	-9.789	14.661	11.377	53.730
15	.0289	.046	59.67	78.83	.606	.594	-9.714	14.935	11.504	56.462
16	.0309	.050	60.26	78.69	.612	.601	-9.567	15.082	11.632	60.366
17	.0327	.052	60.74	78.61	.617	.605	-9.446	15.203	11.712	63.879
18	.0369	.062	62.27	78.28	.632	.621	-9.063	15.587	12.012	75.979
19	.0464	.074	63.86	77.81	.648	.643	-8.666	15.983	12.440	90.617
20	.0529	.085	65.05	77.58	.661	.654	-8.368	16.282	12.650	103.303
21	.0593	.095	66.06	77.32	.671	.666	-8.110	16.539	12.882	115.793
22	.0660	.106	67.13	77.10	.682	.676	-7.847	16.802	13.089	128.870
23	.0729	.117	68.19	76.74	.692	.693	-7.561	17.069	13.415	142.336
24	.C789	.126	69.07	76.64	.701	.698	-7.362	17.288	13.504	154.046
25	.0863	.138	69.91	76.43	.710	.708	-7.151	17.499	13.700	168.489
26	.0933	.150	70.83	76.25	.719	.716	-6.921	17.728	13.865	182.151
27	.0994	.159	71.47	76.08	.726	.724	-6.761	17.888	14.016	194.056
28	.1059	.170	72.39	75.94	.735	.731	-6.531	18.118	14.143	206.742
29	.1130	.181	73.13	75.69	.743	.742	-6.345	18.304	14.367	2220.599
30	.1190	.191	73.82	75.54	.750	.750	-6.173	18.476	14.511	232.309
31	.1263	.202	74.40	75.1	.755	.756	-6.027	18.622	14.623	246.556
32	.1333	.214	75.21	75.5	.764	.764	-5.824	18.826	14.776	260.218
33	.1499	.240	76.58	74.86	.778	.782	-5.463	19.167	15.132	292.616
34	.1678	.269	78.28	74.66	.795	.791	-5.056	19.593	15.314	327.551
35	.1849	.296	79.39	74.39	.806	.804	-4.779	19.871	15.560	360.925
36	.2035	.326	81.C2	74.19	.823	.814	-4.370	20.280	15.743	397.226
37	.22C5	.353	82.35	73.86	.836	.829	-4.038	20.612	16.039	430.405
38	.2383	.382	83.45	73.53	.847	.844	-3.764	20.886	16.341	465.184
39	.2553	.409	84.74	73.32	.860	.854	-3.439	21.200	16.529	498.323
40	.2732	.438	85.92	73.15	.872	.863	-3.145	21.505	16.691	533.258
41	.2901	.465	87.06	72.91	.884	.874	-2.859	21.791	16.907	566.242
42	.3079	.493	88.01	72.65	.894	.886	-2.621	22.029	17.145	600.982
43	.3429	.549	90.00	72.27	.914	.904	-2.122	22.228	17.486	669.290
44	.3781	.606	91.71	72.04	.931	.915	-1.696	22.954	17.704	737.990
45	.4134	.662	93.C6	71.58	.945	.936	-1.358	23.292	18.121	806.884
46	.4483	.718	94.61	71.37	.961	.946	-0.969	23.680	18.312	874.998
47	.4829	.774	95.33	71.09	.968	.959	-0.789	23.860	18.562	942.526
48	.5179	.830	96.33	70.95	.978	.966	-0.538	24.112	18.698	1010.835
49	.5531	.886	97.00	70.76	.985	.975	-0.372	24.278	18.867	1079.534
50	.5879	.942	97.53	70.58	.990	.983	-0.237	24.412	19.030	1147.453
51	.6231	.998	97.83	70.50	.993	.987	-0.163	24.487	19.104	1216.152
52	.6583	1.055	98.14	70.40	.997	.992	-0.085	24.565	19.193	1284.851
53	.6931	1.111	98.35	70.34	.999	.995	-0.034	24.615	19.253	1352.770
54	.7279	1.166	98.43	70.36	1.000	.994	-0.012	24.637	19.234	1420.688
55	.7629	1.222	98.42	70.33	1.000	.995	-0.015	24.635	19.261	1488.997
56	.7981	1.279	98.51	70.28	1.000	.998	-0.008	24.658	19.309	1557.696
57	.8333	1.335	98.51	70.24	1.000	.999	-0.007	24.656	19.339	1626.396
58	.8661	1.391	98.63	70.21	1.002	1.001	-0.037	24.667	19.372	1694.314
59	.9035	1.448	98.61	70.24	1.001	1.000	-0.031	24.680	19.343	1763.404
60	.9384	1.504	98.59	70.20	1.001	1.001	-0.028	24.677	19.377	1831.517
61	.9733	1.560	98.63	70.17	1.002	1.003	-0.038	24.687	19.403	1899.631
62	.0085	1.616	98.58	70.18	1.000	1.002	-0.025	24.675	19.396	1968.330
63	.1.2931	2.072	98.46	70.17	1.000	1.003	-0.005	24.645	19.401	2523.779
64	.1.5794	2.531	98.50	70.20	1.000	1.001	-0.002	24.654	19.376	3082.546
65	.1.8655	2.989	98.36	70.19	0.999	1.002	-0.032	24.618	19.386	3640.922
66	.2.1507	3.446	98.36	70.19	0.999	1.002	-0.030	24.619	19.386	4197.542
67	.2.4365	3.904	98.31	70.21	0.998	1.001	-0.043	24.606	19.371	4755.333
68	.2.7220	4.362	98.36	70.21	0.999	1.001	-0.030	24.619	19.371	5312.538
69	3.0080	4.820	98.38	70.22	0.999	1.000	-0.025	24.624	19.360	5870.719

Table 38.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 12. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y+ = 35$
FREE STREAM VELOCITY =	98.743	98.743
FREE STREAM TEMPERATURE =	68.365	
WALL TEMPERATURE =	90.950	
WALL HEAT FLUX =	.07688	
FREE STREAM DENSITY =	.07669	
FREE STREAM KINEMATIC VISCOSITY =	.0001590	
DENSITY OF FLUID AT WALL =	.07354	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001713	
WALL/FREE STREAM DENSITY RATIO =	.95898	
LOCATION REYNOLDS NUMBER (REX) =	2289495.50	
INPUT VALUE OF VELOCITY DELTA =	.88000	
INPUT VALUE OF TEMPERATURE DELTA =	.98000	
CALCULATED DELTA =		.75613
DISPLACEMENT THICKNESS (DELSTAR) =	.00000	
MOMENTUM THICKNESS (THETA) =	.10810	.10819
ENERGY-DISSIPATION THICKNESS =	.07614	.07633
ENTHALPY THICKNESS =	.13557	.13569
SHAPE FACTOR 12 (DELSTAR/THETA) =	.00352	.00352
SHAPE FACTOR 32 (ENERGY/THETA) =	1.41970	1.41733
MOMENTUM THICKNESS REYNOLDS NUMBER =	1.78051	1.77755
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	3939.50	3949.52
Skin Friction Coefficient =	5592.92	5597.76
Friction Velocity =	.003085	
LAW OF THE WALL CONSTANT (K) =	3.96012	
LAW OF THE WALL CONSTANT (C) =	.41000	
WAKE STRENGTH =	5.00000	.44447
CLAUSERS 'DELTA' INTEGRAL =	-2.46493	-2.61005
CLAUSERS 'G' INTEGRAL =	17.22683	17.15648
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.10172	.10468
MOMENTUM THICKNESS - CONSTANT DENSITY =	.07688	.07708
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.32315	1.35800
LOCATION -X- =	44.25000	
Z = CENTERLINE		

Table 39.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 12. GRID NO. 2

REDUCED PROFILE DATA

N	INCHES	Y	Y/	U	T	U/UE	THETA	UTAU	U(+)	U(-)	U(0)	Y(+)
1	.0057	.008	37.55	83.72	.380	.320	-15.452	9.452	6.570	11.041		
2	.0070	.009	40.94	82.73	.415	.364	-14.596	10.336	7.474	13.546		
3	.0082	.011	44.30	81.97	.449	.398	-13.747	11.288	8.163	15.858		
4	.0086	.012	45.61	81.64	.462	.412	-13.416	11.518	8.463	17.014		
5	.0100	.013	48.23	81.09	.488	.436	-12.756	12.178	8.961	19.326		
6	.0116	.015	50.45	80.50	.511	.463	-12.196	12.739	9.498	22.409		
7	.0130	.017	51.87	80.05	.525	.483	-11.835	13.099	9.911	25.107		
8	.0136	.018	52.56	79.82	.532	.493	-11.663	13.271	10.121	26.649		
9	.0160	.021	54.18	79.32	.549	.515	-11.253	13.682	10.576	30.888		
10	.0181	.024	55.45	78.88	.562	.534	-10.932	14.003	10.971	34.934		
11	.0212	.026	56.12	78.70	.566	.542	-10.762	14.172	11.136	38.210		
12	.0215	.028	56.82	78.54	.575	.549	-10.587	14.347	11.279	41.485		
13	.0230	.030	57.39	78.25	.581	.562	-10.442	14.492	11.548	44.376		
14	.0250	.033	57.96	78.05	.587	.571	-10.298	14.636	11.731	48.229		
15	.0270	.036	58.66	78.08	.594	.570	-10.121	14.813	11.703	52.083		
16	.0290	.038	59.29	77.97	.600	.575	-9.962	14.973	11.805	55.937		
17	.0306	.041	59.80	77.81	.606	.582	-9.835	15.100	11.949	59.020		
18	.0369	.049	61.33	77.18	.621	.610	-9.447	15.487	12.521	71.159		
19	.0440	.058	62.75	76.75	.636	.629	-9.088	15.847	12.906	84.840		
20	.0510	.067	64.09	76.30	.649	.649	-8.751	16.183	13.318	98.328		
21	.0569	.075	65.06	76.02	.659	.661	-8.499	16.435	13.570	109.696		
22	.0638	.084	66.38	75.76	.672	.672	-8.173	16.762	13.808	122.992		
23	.0709	.094	67.34	75.65	.682	.677	-7.929	17.005	13.911	136.673		
24	.0772	.102	68.10	75.45	.690	.686	-7.738	17.197	14.095	148.812		
25	.0838	.111	68.93	75.22	.698	.696	-7.528	17.406	14.299	161.529		
26	.0912	.121	69.66	74.92	.705	.710	-7.344	17.590	14.572	175.788		
27	.0970	.128	70.39	74.88	.713	.711	-7.158	17.776	14.809	186.964		
28	.1040	.138	70.95	74.66	.719	.721	-7.017	17.917	14.813	200.452		
29	.1112	.147	71.77	74.59	.727	.724	-6.811	18.123	14.873	214.325		
30	.1172	.155	72.52	74.52	.734	.728	-6.621	18.313	14.938	225.886		
31	.1242	.164	72.86	74.25	.738	.740	-6.535	18.399	15.165	239.374		
32	.1314	.174	73.68	74.04	.746	.746	-6.329	18.605	15.376	253.248		
33	.1479	.196	74.94	73.85	.759	.759	-6.011	18.924	15.548	285.041		
34	.1656	.219	76.64	73.46	.776	.756	-5.582	19.352	15.699	319.147		
35	.1829	.242	77.54	73.24	.785	.785	-5.354	19.580	16.102	352.481		
36	.2012	.266	78.66	72.98	.799	.799	-5.017	19.917	16.333	387.743		
37	.2178	.268	80.04	72.67	.811	.809	-4.723	20.211	16.616	419.729		
38	.2358	.312	81.22	72.38	.823	.822	-4.424	20.511	16.887	454.413		
39	.2531	.335	82.33	72.19	.834	.831	-4.148	20.790	17.057	487.747		
40	.2708	.358	83.23	72.07	.843	.836	-3.918	21.016	17.168	521.853		
41	.2880	.381	84.15	71.71	.852	.852	-3.685	21.250	17.488	554.995		
42	.3062	.405	85.34	71.55	.864	.859	-3.464	21.550	17.634	589.064		
43	.341C	.451	87.04	71.21	.881	.874	-2.956	21.978	17.944	657.119		
44	.3761	.497	88.69	70.82	.898	.891	-2.540	22.395	18.304	724.752		
45	.410E	.543	90.24	70.39	.914	.910	-2.148	22.787	18.692	791.614		
46	.4446	.590	91.68	70.23	.926	.917	-1.784	23.151	18.834	859.439		
47	.4811	.636	93.02	70.06	.942	.925	-1.445	23.490	18.988	927.072		
48	.5159	.682	94.10	69.66	.953	.943	-1.173	23.761	19.356	994.127		
49	.5510	.729	95.23	69.52	.964	.949	-8.87	24.047	19.482	1061.760		
50	.5862	.775	95.96	69.36	.972	.956	-6.997	24.238	19.626	1129.586		
51	.6208	.821	96.64	69.13	.979	.966	-5.324	24.402	19.838	1196.255		
52	.6557	.867	97.28	68.93	.985	.975	-3.629	24.566	20.023	1263.503		
53	.6907	.914	97.70	68.86	.989	.978	-2.626	24.672	20.179	1353U.943		
54	.7260	.960	98.09	68.70	.993	.985	-1.64	24.770	20.229	1398.962		
55	.7612	1.007	98.20	68.59	.994	.990	-1.38	24.796	20.333	1466.787		
56	.7962	1.053	98.40	68.54	.997	.992	-0.655	24.849	20.378	1534.227		
57	.8308	1.099	98.53	68.49	.998	.994	-0.053	24.882	20.416	1600.897		
58	.6660	1.145	98.66	68.49	.999	.994	-0.020	24.914	20.418	1666.723		
59	.9008	1.191	98.77	68.42	1.000	.997	-0.006	24.930	20.480	1735.778		
60	.9357	1.238	98.73	68.41	1.000	.998	-0.004	24.933	20.494	1803.025		
61	.9710	1.284	98.74	68.36	1.000	.999	-0.002	24.952	20.522	1871.043		
62	1.0058	1.330	98.81	68.34	1.001	1.001	0.017	24.952	20.564	1938.744		
63	1.3386	1.771	98.81	68.34	1.001	1.001	0.017	24.952	20.564	2222.161		
64	1.6722	2.212	98.81	68.38	1.001	1.000	0.018	24.952	20.564	3865.734		
65	2.0062	2.653	98.80	68.34	1.001	1.001	0.014	24.948	20.554	5148.448		
66	3.3391	3.054	98.75	68.37	1.000	1.000	0.002	24.941	20.544	5450.7187		
67	6.6719	3.534	98.77	68.35	1.000	1.001	0.007	24.926	20.545	5792.406		
68	3.0061	3.976	98.71	68.35	1.000	1.001	0.009	24.920	20.564	6433.859		
69	3.3390	4.416	98.69	68.33	1.000	1.002	0.014	24.920	20.564	7075.120		
70	3.6718	4.856	98.69	68.35	1.000	1.001	0.005	24.939	20.560	7719.463		
71	4.0062	5.298	98.76	68.34	1.000	1.001	0.005	24.939	20.560			

Table 39.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 13. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	SUBLAYER FUNCTION FROM WALL TO Y+=35	STANDARD
FREE STREAM VELOCITY =	98.605	98.605	
FREE STREAM TEMPERATURE =	68.719		
WALL TEMPERATURE =	91.260		
WALL HEAT FLUX =	.07820		
FREE STREAM DENSITY =	.07664		
FREE STREAM KINEMATIC VISCOSITY =	.0001592		
DENSITY OF FLUID AT WALL =	.07350		
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001714		
WALL/FREE STREAM DENSITY RATIO =	.95909		
LOCATION REYNOLDS NUMBER (REX) =	2283583.87		
INPUT VALUE OF VELOCITY DELTA =	.92000		
INPUT VALUE OF TEMPERATURE DELTA =	.97000		
CALCULATED DELTA =			.76072
DELTA 99.5% INPUT =	.00000		
DISPLACEMENT THICKNESS (DELSTAR) =	.11020		.11044
MOMENTUM THICKNESS (THETAA) =	.07783		.07793
ENERGY-DISSIPATION THICKNESS =	.13844		.13844
ENTHALPY THICKNESS =	.00342		.00342
SHAPE FACTOR 12 (DELSTAR/THETAA) =	1.41595		1.41707
SHAPE FACTOR 32 (ENERGY/THETAA) =	1.77879		1.77643
MOMENTUM THICKNESS REYNOLDS NUMBER =	4016.53		4021.85
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	5687.19		5699.24
SKIN FRICTION COEFFICIENT =	.003051		
FRICTION VELOCITY =	3.93252		
LAW OF THE WALL CONSTANT (K) =	.41000		
LAW OF THE WALL CONSTANT (C) =	5.00000		
WAKE STRENGTH =			.47413
CLAUSERS 'DELTA' INTEGRAL =	-2.55659		-2.68361
CLAUSERS 'G' INTEGPAL =	17.74484		17.82472
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.10438		.10703
MOMENTUM THICKNESS - CONSTANT DENSITY =	.07857		.07868
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.32850		1.36035
LOCATION -X- =	44.25000		
Z = +6 INCHES			

Table 40.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 D4/03/79
 RUN NO. 7. POINT 13. GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y/	U	T	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0048	.006	34.99	84.60	.355	.296	-16.176	8.898	5.912	9.233
2	.0063	.008	38.56	83.33	.391	.352	-15.268	9.806	7.031	12.100
3	.0072	.010	41.36	82.69	.419	.380	-14.557	10.517	7.606	13.820
4	.0080	.011	44.08	82.31	.447	.397	-13.666	11.209	7.940	15.350
5	.0092	.012	46.43	81.59	.471	.426	-12.266	11.806	8.577	17.643
6	.0107	.014	49.19	80.84	.499	.462	-12.565	12.509	9.248	20.511
7	.0121	.016	50.72	80.56	.514	.474	-12.175	12.899	9.472	23.167
8	.0130	.017	51.59	80.29	.523	.487	-11.957	13.118	9.735	24.907
9	.0139	.020	53.30	79.58	.541	.518	-11.521	13.563	10.363	29.304
10	.0147	.022	54.51	79.39	.553	.527	-11.030	13.862	10.529	32.553
11	.0150	.025	55.23	79.02	.560	.543	-11.212	14.045	10.855	36.377
12	.0207	.027	56.27	78.82	.571	.552	-10.764	14.310	11.034	39.626
13	.0212	.029	56.89	78.66	.574	.559	-10.683	14.391	11.178	41.729
14	.0239	.031	57.26	78.35	.581	.573	-10.514	14.560	11.448	45.743
15	.0254	.034	57.88	78.16	.587	.581	-10.356	14.718	11.622	49.375
16	.0278	.037	58.49	77.98	.593	.589	-10.201	14.873	11.780	53.198
17	.0296	.039	59.06	77.81	.599	.597	-10.055	15.019	11.928	56.639
18	.0365	.046	60.78	77.40	.616	.615	-9.619	15.455	12.299	69.828
19	.0434	.057	62.17	77.13	.631	.627	-9.264	15.810	12.531	83.018
20	.0502	.066	63.50	76.80	.644	.642	-8.927	16.147	12.827	96.016
21	.0564	.074	64.56	76.44	.655	.657	-8.657	16.418	13.142	107.868
22	.0630	.083	65.43	76.09	.664	.673	-8.437	16.637	13.458	120.484
23	.0701	.092	66.55	75.95	.675	.679	-8.152	16.923	13.584	134.056
24	.0761	.100	67.29	75.79	.682	.686	-7.962	17.112	13.724	145.525
25	.0830	.109	68.22	75.48	.692	.700	-7.726	17.348	14.000	158.715
26	.0902	.119	69.03	75.24	.708	.711	-7.520	17.554	14.209	172.478
27	.0960	.126	69.82	75.17	.715	.714	-7.320	17.754	14.274	183.565
28	.1029	.135	70.53	74.97	.723	.723	-7.138	17.936	14.454	196.754
29	.1098	.144	71.04	74.73	.720	.734	-7.009	18.065	14.667	209.944
30	.1162	.153	71.74	74.62	.728	.738	-6.832	18.242	14.761	222.178
31	.1231	.162	72.40	74.53	.734	.742	-6.664	18.411	14.851	235.367
32	.1298	.171	72.97	74.51	.740	.743	-6.519	18.555	14.856	248.175
33	.1470	.193	74.66	74.09	.757	.762	-6.089	18.985	15.234	281.053
34	.1647	.217	75.84	73.82	.769	.774	-5.788	19.286	15.472	314.887
35	.1822	.240	77.01	73.45	.781	.790	-5.492	19.582	15.800	348.339
36	.2000	.263	78.73	73.13	.794	.804	-5.156	19.918	16.086	382.364
37	.2170	.285	79.63	72.92	.808	.814	-4.826	20.248	16.271	414.861
38	.2348	.309	80.56	72.78	.817	.820	-4.588	20.486	16.396	448.886
39	.2521	.331	81.62	72.61	.830	.827	-4.268	20.806	16.545	481.955
40	.2700	.355	82.78	72.26	.840	.843	-4.023	21.051	16.853	516.172
41	.2871	.377	83.64	72.06	.848	.852	-3.806	21.268	17.033	548.859
42	.3048	.401	84.75	72.02	.859	.854	-3.524	21.550	17.068	582.693
43	.3398	.447	86.65	71.47	.879	.878	-3.041	22.033	17.552	649.597
44	.3752	.493	88.23	71.12	.895	.893	-2.638	22.436	17.866	717.265
45	.4100	.539	90.01	70.78	.913	.909	-2.184	22.690	18.169	783.787
46	.4452	.585	91.44	70.53	.927	.920	-1.821	22.523	18.389	851.073
47	.4822	.631	92.46	70.19	.938	.935	-1.562	23.512	18.688	917.977
48	.5154	.678	93.70	70.13	.950	.938	-1.247	23.827	18.748	985.263
49	.5498	.723	94.83	69.79	.962	.953	-0.961	24.114	19.046	1051.020
50	.5850	.769	95.58	69.51	.969	.965	-0.769	24.305	19.294	1118.306
51	.6201	.815	96.26	69.35	.976	.972	-0.596	24.479	19.434	1185.401
52	.6549	.861	96.83	69.31	.982	.974	-0.452	24.622	19.474	1251.922
53	.6898	.907	97.28	69.12	.987	.982	-0.338	24.736	19.642	1318.635
54	.7250	.953	97.69	69.04	.991	.986	-0.233	24.841	19.709	1385.921
55	.7600	.999	98.03	68.96	.994	.989	-0.146	24.928	19.781	1452.824
56	.7952	1.045	98.20	68.86	.996	.994	-0.053	24.971	19.867	1520.110
57	.8298	1.091	98.37	68.80	.998	.996	-0.059	25.016	19.922	1586.250
58	.8648	1.137	98.49	68.83	.999	.995	-0.029	25.045	19.900	1653.153
59	.8999	1.183	98.53	68.79	.999	.997	-0.020	25.054	19.934	1720.248
60	.9350	1.229	98.55	68.78	.999	.997	-0.013	25.061	19.944	1787.343
61	.9698	1.275	98.61	68.76	1.000	.998	-0.002	25.076	19.964	1853.865
62	1.0050	1.321	98.65	68.74	1.000	.999	-0.011	25.085	19.973	1921.151
63	1.0380	1.375	98.61	68.71	1.000	1.001	-0.004	25.075	20.007	2557.692
64	1.0670	2.196	98.62	68.71	1.000	1.001	-0.004	25.078	20.007	3193.851
65	2.0048	2.635	98.57	68.72	1.000	1.000	-0.010	25.065	19.992	3832.304
66	2.3379	3.073	98.54	68.70	1.000	1.001	-0.016	25.058	20.017	4469.036
67	2.6714	3.512	98.52	68.72	1.000	1.000	-0.022	25.053	19.992	5106.533
68	3.0048	3.950	98.53	68.74	1.000	0.999	-0.020	25.054	19.981	5743.839
69	3.3379	4.388	98.60	68.83	1.000	0.995	-0.020	25.072	19.893	6380.572
70	3.6708	4.825	98.55	68.76	1.000	0.998	-0.015	25.059	19.963	7016.922
71	4.0050	5.265	98.59	68.75	1.000	0.999	-0.003	25.071	19.967	7655.757

Table 40.

JOB KLD72 TAPE 316ER- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 14. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y+ = 35$
FREE STREAM VELOCITY =	98.785	98.785
FREE STREAM TEMPERATURE =	68.964	
WALL TEMPERATURE =	91.310	
WALL HEAT FLUX =	.07699	
FREE STREAM DENSITY =	.07660	
DENSITY OF FLUID AT WALL =	.0001594	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.07349	
WALL/FREE STREAM DENSITY RATIO =	.0001715	
LOCATION REYNOLDS NUMBER (REX) =	.95944	
INPUT VALUE OF VELOCITY DELTA =	2285884.03	
INPUT VALUE OF TEMPERATURE DELTA =	.95000	
CALCULATED DELTA =	1.10000	
DELTA 99.5% INPUT =	.00000	.75746
DISPLACEMENT THICKNESS (DELSTAR) =	.11130	.11131
MOMENTUM THICKNESS (THETA) =	.07812	.07837
ENERGY-DISSIPATION THICKNESS =	.13898	.13918
ENTHALPY THICKNESS =	.00351	.00352
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.42476	1.42034
SHAPE FACTOR 32 (ENERGY/THETA) =	1.77908	1.77586
MOMENTUM THICKNESS REYNOLDS NUMBER =	4035.62	4048.52
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	5749.79	5750.27
SKIN FRICTION COEFFICIENT =	.003027	
FRICTION VELOCITY =	3.92368	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.49849
CLAUSERS 'DELTA' INTEGRAL =	-2.55457	-2.71401
CLAUSERS 'G' INTEGRAL =	18.33572	18.17202
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.10463	.10760
MOMENTUM THICKNESS - CONSTANT DENSITY =	.07887	.07913
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.32664	1.36230

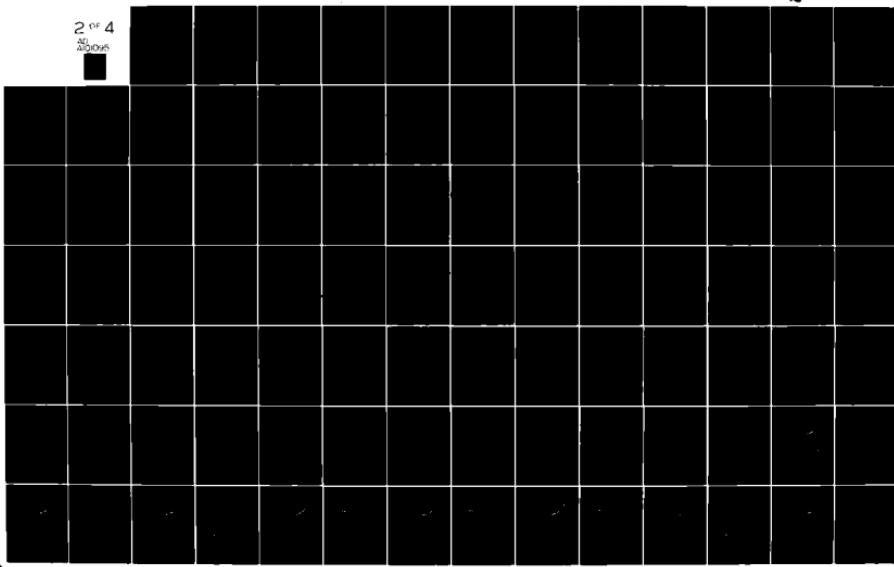
LOCATION -X- 44.25000

Z = -6 INCHES

Table 41.

AD-A101 095 UNITED TECHNOLOGIES RESEARCH CENTER EAST HARTFORD CONN F/G 20/4
DATA REPORT, VOLUME I, VELOCITY AND TEMPERATURE PROFILE DATA FO--ETC(1)
JAN 81 M F BLAIR F49620-78-C-0064
UNCLASSIFIED UTRC/R81-914388-15 AFOSR-TR-81-0516 NL

2 of 4
NO
ACTIONS



JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79
 RUN NO. 7. POINT 14. GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE	U(+)	T(+)	Y(+)
1	.0063	.008	37.89	83.60	.384	.345	-15.520	9.657	6.926	12.071
2	.0076	.010	41.69	82.65	.422	.388	-14.552	10.625	7.787	14.550
3	.0085	.011	44.48	82.16	.450	.410	-13.841	11.335	8.226	16.266
4	.0097	.013	46.97	81.60	.475	.434	-13.206	11.970	8.726	18.554
5	.0105	.014	48.37	81.33	.490	.447	-12.848	12.329	8.972	20.080
6	.0121	.016	50.12	80.45	.507	.486	-12.403	12.774	9.758	23.131
7	.0133	.018	51.74	80.27	.524	.494	-12.459	13.187	9.928	25.419
8	.0143	.019	52.59	80.22	.532	.496	-12.774	13.403	9.968	27.326
9	.0164	.022	53.74	79.89	.544	.511	-13.480	13.696	10.266	31.331
10	.0189	.025	54.97	79.29	.557	.538	-13.166	14.011	10.810	36.098
11	.0203	.027	55.55	79.10	.562	.546	-13.019	14.157	10.976	38.768
12	.0221	.029	56.51	78.83	.572	.558	-10.775	14.402	11.217	42.200
13	.0254	.032	57.05	78.59	.578	.569	-10.637	14.540	11.431	45.633
14	.0275	.034	57.38	78.43	.581	.576	-10.552	14.625	11.578	48.493
15	.0275	.036	58.02	78.30	.587	.582	-10.390	14.787	11.698	52.498
16	.0299	.040	58.81	78.30	.595	.586	-10.187	14.990	11.695	57.075
17	.0312	.041	59.31	78.22	.600	.613	-9.061	15.116	11.768	59.554
18	.0374	.049	60.60	77.66	.629	.628	-9.342	15.444	12.270	71.377
19	.0445	.059	62.13	77.28	.643	.641	-8.985	15.834	12.881	84.916
20	.0513	.068	63.53	76.98	.652	.653	-8.759	16.192	13.110	109.324
21	.0573	.076	64.42	76.73	.664	.667	-8.450	16.418	13.391	123.626
22	.0648	.086	65.63	76.41	.676	.674	-8.162	17.027	13.544	137.356
23	.0720	.095	66.76	76.24	.682	.683	-7.995	17.181	13.710	147.463
24	.0773	.102	67.41	76.06	.693	.697	-7.741	17.435	13.997	161.574
25	.0847	.112	68.41	75.74	.698	.700	-7.604	17.573	14.067	174.351
26	.0914	.121	68.95	75.66	.705	.703	-7.440	17.737	14.130	185.602
27	.0973	.128	69.59	75.59	.713	.713	-7.235	17.942	14.316	199.141
28	.1044	.138	70.40	75.38	.719	.725	-7.079	18.098	14.571	221.299
29	.1113	.147	71.01	75.10	.727	.733	-6.861	18.315	14.721	223.740
30	.1173	.155	71.86	74.93	.735	.735	-6.661	18.515	14.769	237.852
31	.1247	.165	72.65	74.88	.742	.741	-6.563	18.674	14.878	250.819
32	.1315	.174	73.27	74.76	.756	.755	-6.143	19.033	15.412	264.000
33	.1489	.197	74.68	74.43	.768	.767	-5.835	19.342	15.688	316.799
34	.1661	.219	75.89	74.17	.782	.781	-5.483	19.694	15.888	349.598
35	.1833	.242	77.27	73.86	.794	.793	-5.193	19.984	15.934	384.304
36	.2015	.266	78.41	73.58	.806	.805	-4.872	20.304	16.170	416.531
37	.2184	.288	79.67	73.32	.818	.815	-4.591	20.586	16.362	450.666
38	.2363	.312	80.77	73.11	.830	.818	-4.273	20.904	16.428	483.083
39	.2533	.334	82.02	73.03	.841	.837	-4.005	21.171	16.806	517.408
40	.2715	.358	83.07	72.61	.850	.844	-3.767	21.409	16.957	549.826
41	.2883	.381	84.00	72.45	.860	.852	-3.528	21.648	17.115	584.151
42	.3063	.404	84.94	72.27	.879	.875	-3.037	22.140	17.581	651.656
43	.3417	.451	86.87	71.75	.898	.887	-2.562	22.615	17.819	718.018
44	.3765	.497	88.73	71.49	.912	.903	-2.212	22.964	18.140	784.379
45	.4113	.543	90.10	71.13	.926	.914	-1.860	23.317	18.365	851.503
46	.4465	.590	91.49	70.88	.939	.928	-1.538	23.638	18.647	918.055
47	.4814	.636	92.75	70.57	.951	.947	-1.233	23.944	19.030	984.797
48	.5164	.682	93.95	70.14	.961	.947	-1.970	24.206	19.665	1051.731
49	.5515	.728	94.98	70.10	.969	.963	-1.785	24.592	19.342	1118.655
50	.5867	.775	95.71	69.79	.977	.968	-1.582	24.959	19.448	1185.407
51	.6216	.821	96.50	69.68	.983	.971	-1.426	25.351	19.508	1251.959
52	.6565	.867	97.11	69.61	.986	.977	-1.358	25.819	19.618	1319.083
53	.6917	.913	97.38	69.49	.990	.985	-1.184	26.924	19.790	1385.826
54	.7267	.959	97.79	69.29	.993	.989	-1.137	26.993	19.874	1451.805
55	.7613	1.005	98.06	69.20	.995	.991	-1.087	27.089	19.909	1518.929
56	.7965	1.052	98.34	69.16	.997	.993	-1.061	27.116	20.023	1586.053
57	.8317	1.098	98.44	69.12	.998	.995	-1.057	27.162	20.026	1652.033
58	.8663	1.144	98.55	69.08	.998	.997	-1.015	27.173	20.035	1718.776
59	.9013	1.190	98.56	69.04	.999	.997	-1.004	27.195	20.096	1852.452
60	.9365	1.236	98.73	69.03	1.000	.997	-1.012	27.192	20.102	1919.957
61	.9714	1.282	98.77	69.02	1.000	.997	-1.007	27.162	20.082	2189.212
62	1.0068	1.329	98.74	68.95	1.001	.997	-1.015	27.184	20.077	2826.327
63	1.3393	1.768	98.85	68.97	1.000	1.000	-1.005	27.161	20.072	4461.327
64	1.6724	2.206	98.73	68.97	1.000	1.000	-1.005	27.176	20.052	5096.717
65	2.0065	2.649	98.81	68.98	1.000	1.000	-1.000	27.185	20.057	5733.633
66	2.3395	3.089	98.72	68.98	1.000	1.000	-1.008	27.158	20.042	6367.879
67	2.6724	3.529	98.78	69.00	1.000	1.000	-1.018	27.187	20.026	7003.651
68	3.0067	3.969	98.82	69.01	1.000	1.000	-1.010	27.202	19.966	7640.185
69	3.3393	4.409	98.71	69.03	1.000	1.000	-1.025	27.202	19.966	
70	3.6727	4.849	98.83	69.03	1.000	1.000	-1.025	27.202	19.966	
71	4.0065	5.289	98.88	69.10	1.001	1.000	-1.025	27.202	19.966	

Table 41.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 15. GRID NO. 2

BOUNDARY LAYER PROPERTIES

LINEAR INTERPOLATION	STANDARD SUBLAYER FUNCTION FROM TO WALL	WALL TO $Y+ = 35$
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FREE STREAM VELOCITY	=	98.898	98.898
FREE STREAM TEMPERATURE	=	68.802	
WALL TEMPERATURE	=	91.800	
WALL HEAT FLUX	=	.07737	
FREE STREAM DENSITY	=	.07662	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.0001593	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.07343	
WALL/FREE STREAM DENSITY RATIO	=	.0001717	
LOCATION REYNOLDS NUMBER (REX)	=	.95830	
INPUT VALUE OF VELOCITY DELTA	=	2701638.62	
INPUT VALUE OF TEMPERATURE DELTA	=	1.08000	
CALCULATED DELTA	=	1.18000	.88723
DISPLACEMENT THICKNESS (DELSTAR)	=	.00000	
MOMENTUM THICKNESS (THETA)	=	.12680	.12699
ENERGY-DISSIPATION THICKNESS	=	.08985	.09000
ENTHALPY THICKNESS	=	.16008	.16012
SHAPE FACTOR 12 (DELSTAR/THETA)	=	.00416	.00416
SHAPE FACTOR 32 (ENERGY/THETA)	=	1.41118	1.41105
MOMENTUM THICKNESS REYNOLDS NUMBER	=	1.78152	1.77919
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	4649.58	4657.01
SKIN FRICTION COEFFICIENT	=	6561.37	6571.27
FRICITION VELOCITY	=	.002964	
LAW OF THE WALL CONSTANT (K)	=	3.88916	
LAW OF THE WALL CONSTANT (C)	=	.41000	
WAKE STRENGTH	=	5.00000	.47639
CLAUSERS 'DELTA' INTEGRAL	=	-2.98334	-3.12375
CLAUSERS 'G' INTEGRAL	=	20.63955	20.66568
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.11998	.12284
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.09073	.09088
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.32241	1.35164

LOCATION -X- 52.21001

Z = CENTERLINE

Table 42.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 15. GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELT A	U FT/SEC	T DEG.F	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0053	.006	35.09	84.82	.355	.304	-16.408	0.022	6.184	10.059
2	.0066	.007	36.77	83.61	.392	.356	-15.460	9.969	7.252	12.512
3	.0078	.009	42.87	82.84	.434	.389	-14.405	11.024	7.933	14.777
4	.0086	.010	46.55	82.45	.450	.406	-13.974	11.455	8.278	16.286
5	.0095	.011	46.91	82.11	.474	.421	-13.368	12.061	8.585	17.985
6	.0111	.013	49.12	81.51	.497	.447	-12.800	12.630	9.112	21.004
7	.0125	.014	50.60	80.98	.512	.470	-12.419	13.011	9.581	23.547
8	.0135	.015	51.43	80.66	.520	.484	-12.206	13.223	9.868	25.534
9	.0157	.018	52.95	80.04	.535	.511	-11.813	13.616	10.416	29.686
10	.0173	.020	55.41	79.97	.546	.514	-11.541	13.888	10.478	32.705
11	.0197	.022	55.49	79.50	.556	.535	-11.303	14.126	10.895	37.234
12	.0212	.024	55.66	79.34	.563	.542	-11.117	14.312	11.038	40.065
13	.0223	.025	55.65	79.16	.567	.550	-11.016	14.413	11.196	42.141
14	.0249	.028	56.90	78.99	.575	.557	-10.798	14.631	11.346	47.048
15	.0267	.030	57.53	78.61	.582	.574	-10.637	14.792	11.685	50.445
16	.0287	.032	58.05	78.38	.587	.583	-10.503	14.927	11.885	54.219
17	.0302	.034	58.28	78.31	.589	.586	-10.444	14.985	11.948	57.050
18	.0366	.041	59.69	78.07	.604	.597	-10.060	15.349	12.164	68.939
19	.0435	.049	61.58	77.65	.623	.615	-9.596	15.833	12.531	82.150
20	.0503	.057	62.72	77.22	.634	.634	-9.302	16.127	12.912	94.982
21	.0563	.063	63.66	76.91	.644	.647	-9.060	16.369	13.187	106.306
22	.0635	.072	64.82	76.68	.655	.657	-8.763	16.666	13.393	119.893
23	.0705	.079	65.69	76.47	.664	.667	-8.538	16.891	13.581	133.104
24	.0763	.086	66.69	76.31	.674	.674	-8.283	17.146	13.724	144.049
25	.0835	.094	67.24	76.06	.680	.684	-8.141	17.288	13.943	157.637
26	.0904	.102	68.11	75.91	.689	.691	-7.917	17.511	14.079	170.659
27	.0963	.109	68.70	75.78	.695	.697	-7.766	17.663	14.195	181.793
28	.1037	.117	69.68	75.54	.705	.707	-7.513	17.916	14.407	195.759
29	.1103	.124	70.27	75.52	.711	.708	-7.360	18.069	14.424	208.214
30	.1165	.131	70.94	75.43	.717	.712	-7.190	18.239	14.498	219.915
31	.1235	.139	71.50	75.23	.723	.721	-7.045	18.384	14.680	233.125
32	.1305	.147	71.86	75.09	.727	.726	-6.952	18.478	14.800	246.335
33	.1473	.166	73.26	74.74	.741	.742	-6.592	18.837	15.113	278.040
34	.1651	.186	74.63	74.46	.755	.754	-6.239	19.190	15.363	311.632
35	.1826	.206	75.93	74.17	.768	.767	-5.905	19.525	15.620	344.658
36	.2003	.226	77.14	73.93	.780	.777	-5.595	19.834	15.826	378.061
37	.2173	.245	78.12	73.72	.790	.786	-5.342	20.087	16.016	410.144
38	.2353	.265	78.95	73.50	.798	.796	-5.126	20.301	16.214	444.113
39	.2524	.285	80.00	73.28	.809	.805	-4.860	20.570	16.401	476.384
40	.2706	.305	81.10	72.90	.820	.822	-4.576	20.853	16.744	510.731
41	.2874	.324	82.11	72.79	.830	.827	-4.317	21.112	16.840	542.436
42	.3053	.344	82.59	72.73	.835	.829	-4.193	21.237	16.892	576.217
43	.3535	.398	85.24	72.08	.862	.857	-3.513	21.916	17.467	667.179
44	.4013	.452	87.33	71.71	.883	.874	-2.974	22.455	17.797	757.387
45	.4495	.507	89.20	71.22	.902	.895	-2.495	22.954	18.226	848.350
46	.4973	.561	90.93	70.92	.919	.908	-2.048	23.381	18.495	938.558
47	.5453	.615	92.53	70.58	.936	.923	-1.636	23.793	18.801	1029.143
48	.5937	.669	93.93	70.15	.950	.941	-1.278	24.152	19.175	1120.488
49	.6414	.723	96.23	69.92	.963	.951	-0.943	24.486	19.382	1210.502
50	.6894	.777	95.94	69.65	.970	.963	-0.759	24.670	19.619	1301.088
51	.7375	.831	96.86	69.44	.979	.972	-0.524	24.905	19.804	1391.862
52	.7855	.885	97.52	69.26	.986	.980	-0.353	25.076	19.966	1482.447
53	.8338	.940	97.82	69.04	.989	.990	-0.208	25.152	20.159	1573.598
54	.8815	.994	98.24	69.11	.993	.987	-0.170	25.259	20.104	1663.617
55	.9243	1.047	98.43	69.00	.995	.991	-0.119	25.310	20.198	1753.825
56	.9775	1.102	98.66	68.95	.998	.994	-0.061	25.368	20.242	1844.788
57	1.0253	1.156	98.79	68.90	.999	.996	-0.029	25.400	20.286	1934.996
58	1.0735	1.210	98.85	68.87	1.000	.997	-0.014	25.416	20.315	2025.959
59	1.1215	1.264	98.86	68.84	1.000	.998	-0.004	25.426	20.338	2116.544
60	1.1694	1.316	98.91	68.78	1.000	1.000	0.000	25.430	20.389	2206.940
61	1.2175	1.372	98.90	68.80	1.000	1.000	0.001	25.437	20.377	2297.714
62	1.2654	1.426	98.90	68.81	1.000	1.000	0.001	25.447	20.368	2386.141
63	1.3131	1.480	98.93	68.80	1.000	1.000	0.001	25.457	20.373	2478.130
64	1.3613	1.534	98.97	68.79	1.000	1.000	0.001	25.467	20.379	2569.093
65	1.4097	1.589	98.95	68.79	1.000	1.000	0.001	25.477	20.386	2660.433
66	1.4571	1.642	98.94	68.82	1.000	1.000	0.001	25.486	20.358	2749.886
67	1.5057	1.697	98.89	68.79	1.000	1.000	0.001	25.496	20.385	2841.603
68	1.5215	2.166	98.89	68.78	1.000	1.000	0.001	25.506	20.388	3262.298
69	1.5385	2.636	98.95	68.80	1.000	1.000	0.001	25.516	20.378	4413.258
70	1.5755	3.106	98.86	68.79	1.000	1.000	0.001	25.526	20.383	5200.218
71	1.6175	3.575	98.82	68.84	1.000	1.000	0.001	25.536	20.343	5985.290
72	1.5888	4.045	98.89	68.82	1.000	1.000	0.001	25.546	20.353	6772.816
73	4.0056	4.515	98.87	68.82	1.000	1.000	0.001	25.421	20.358	7559.398

Table 42.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 17. GRID NO. 2

BOUNDARY LAYER PROPERTIES

		STANDARD INTERPOLATION TO WALL	SUBLAYER FUNCTION FROM WALL TO Y+ = 35
FREE STREAM VELOCITY	=	98.487	98.487
FREE STREAM TEMPERATURE	=	69.224	
WALL TEMPERATURE	=	93.320	
WALL HEAT FLUX	=	.07701	
FREE STREAM DENSITY	=	.07656	
KINEMATIC VISCOSITY	=	.0001595	
DENSITY OF FLUID AT WALL	=	.07323	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.0001726	
WALL/FREE STREAM DENSITY RATIO	=	.95643	
LOCATION REYNOLDS NUMBER (REX)	=	3097732.19	
INPUT VALUE OF VELOCITY DELTA	=	1.28000	
INPUT VALUE OF TEMPERATURE DELTA	=	1.37000	
CALCULATED DELTA	=		1.01568
DELTA 99.5% INPUT	=	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	=	.14522	.14522
MOMENTUM THICKNESS (THETA)	=	.10297	.10324
ENERGY-DISSIPATION THICKNESS	=	.18365	.18386
ENTHALPY THICKNESS	=	.00486	.00486
SHAPE FACTOR 12 (DELSTAR/THETA)	=	1.41034	1.40660
SHAPE FACTOR 32 (ENERGY/THETA)	=	1.76353	1.78083
MOMENTUM THICKNESS REYNOLDS NUMBER	=	5298.57	5312.58
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	7472.80	7472.70
SKIN FRICTION COEFFICIENT	=	.002871	
FRICTION VELOCITY	=	3.81584	
LAW OF THE WALL CONSTANT (K)	=	.41000	
LAW OF THE WALL CONSTANT (C)	=	5.00000	
WAKE STRENGTH	=		.49878
CLAUSERS 'DELTA' INTEGRAL	=	-3.44412	-3.62274
CLAUSERS 'G' INTEGRAL	=	24.23917	24.04294
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.13691	.14036
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.10398	.10427
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.31660	1.34614

LOCATION -X- 60.20000

Z = +6 INCHES

Table 43.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 17. GRID NO. 2

REDUCED PROFILE DATA

N	INCHES	Y'	U	T	U/UE	THETA	UTAU	U(+)	T(+)	V(+)
1	.0069	.007	38.62	85.02	.392	.344	-15.688	10.122	7.227	12.770
2	.0081	.008	41.43	84.11	.421	.382	-14.952	10.858	8.020	14.981
3	.0091	.009	44.05	83.52	.447	.407	-14.266	11.544	8.536	16.823
4	.0100	.010	45.76	83.26	.465	.417	-13.817	11.993	8.758	18.482
5	.0111	.011	47.04	82.79	.478	.437	-13.482	12.328	9.171	20.509
6	.0127	.013	49.20	82.11	.500	.465	-12.916	12.894	9.766	23.457
7	.0139	.014	50.19	81.54	.510	.478	-12.657	13.153	10.026	25.668
8	.0149	.015	50.84	81.05	.516	.489	-12.248	13.323	10.257	27.511
9	.0173	.017	52.50	81.05	.533	.509	-12.052	13.758	10.685	31.933
10	.0191	.019	53.33	80.57	.541	.529	-11.835	13.975	11.104	35.250
11	.0214	.021	54.30	80.30	.551	.541	-11.579	14.230	11.342	39.488
12	.0227	.022	54.77	80.12	.556	.548	-11.457	14.353	11.496	41.883
13	.0244	.024	55.33	79.85	.562	.559	-11.296	14.514	11.730	45.016
14	.0261	.026	55.94	79.84	.568	.559	-11.149	14.661	11.739	48.148
15	.0284	.028	56.54	79.60	.574	.568	-10.993	14.817	11.944	52.386
16	.0305	.030	57.13	79.40	.580	.578	-10.838	14.972	12.118	56.256
17	.0317	.031	57.36	79.32	.582	.581	-10.777	15.033	12.192	58.467
18	.0383	.038	59.14	78.98	.600	.599	-10.312	15.498	12.577	70.629
19	.0452	.045	60.24	78.34	.612	.622	-10.024	15.786	13.046	83.343
20	.0523	.052	61.57	78.07	.625	.633	-9.676	16.134	13.278	96.426
21	.0563	.057	62.57	77.87	.635	.641	-9.412	16.398	13.453	107.481
22	.0653	.064	63.79	77.55	.648	.654	-9.092	16.718	13.732	120.380
23	.0722	.071	64.66	77.31	.657	.664	-8.865	16.945	13.939	133.094
24	.0785	.077	65.29	77.14	.663	.672	-8.701	17.109	14.092	144.703
25	.0852	.084	66.05	76.93	.671	.680	-8.501	17.308	14.269	157.049
26	.0922	.091	66.87	76.78	.679	.687	-8.285	17.525	14.406	169.947
27	.0981	.097	67.60	76.65	.686	.692	-8.095	17.715	14.517	180.819
28	.1055	.104	68.11	76.43	.692	.701	-7.960	17.849	14.706	194.454
29	.1122	.110	68.81	76.36	.699	.703	-7.778	18.032	14.753	206.800
30	.1182	.116	69.47	76.32	.705	.706	-7.604	18.206	14.803	217.856
31	.1249	.123	70.01	76.04	.711	.717	-7.463	18.347	15.050	230.202
32	.1322	.130	70.52	75.76	.716	.729	-7.329	18.481	15.293	243.653
33	.1491	.147	71.92	75.60	.730	.736	-6.963	18.847	15.433	274.794
34	.1668	.164	72.99	75.01	.741	.760	-6.683	19.127	15.947	307.408
35	.1843	.181	74.12	75.00	.753	.760	-6.386	19.424	15.955	339.655
36	.2023	.199	75.29	74.66	.764	.774	-6.078	19.731	16.249	372.822
37	.2194	.216	76.23	74.26	.774	.790	-5.833	19.977	16.576	377.331
38	.2372	.234	77.33	74.24	.785	.792	-5.545	20.265	16.617	437.131
39	.2543	.250	78.32	74.06	.795	.799	-5.285	20.525	16.775	468.640
40	.2721	.268	79.04	73.95	.803	.804	-5.096	20.713	16.869	501.439
41	.2893	.285	79.88	73.81	.811	.810	-4.876	20.933	16.989	533.132
42	.3073	.303	80.77	73.44	.820	.825	-4.642	21.168	17.314	566.300
43	.3551	.350	82.72	73.14	.840	.838	-4.131	21.679	17.576	654.378
44	.4033	.397	84.71	72.65	.860	.858	-3.611	22.199	17.996	743.194
45	.4513	.444	86.66	72.34	.880	.871	-3.099	22.711	18.272	831.641
46	.4993	.492	88.24	71.85	.896	.891	-2.685	23.125	18.697	920.088
47	.5469	.538	89.78	71.46	.912	.907	-2.282	23.528	19.040	1007.798
48	.5955	.586	91.45	71.20	.929	.918	-1.845	23.965	19.260	1097.350
49	.6431	.633	92.50	70.833	.939	.933	-1.569	24.241	19.581	1185.060
50	.6909	.680	93.71	70.633	.952	.941	-1.251	24.559	19.755	1273.138
51	.7393	.728	94.71	70.28	.962	.956	-0.991	24.814	20.066	1362.322
52	.7870	.775	95.56	70.14	.970	.962	-0.766	25.044	20.182	1450.216
53	.8349	.822	96.33	69.88	.978	.973	-0.565	25.245	20.412	1538.479
54	.8831	.869	96.79	69.80	.983	.976	-0.444	25.365	20.479	1627.295
55	.9311	.917	97.27	69.68	.988	.981	-0.319	25.491	20.588	1715.742
56	.9789	.964	97.63	69.56	.991	.986	-0.226	25.585	20.686	1803.820
57	1.0273	1.011	97.95	69.51	.995	.988	-0.139	25.671	20.733	1893.004
58	1.0749	1.058	98.07	69.45	.996	.991	-0.109	25.701	20.787	1980.714
59	1.1230	1.106	98.18	69.32	.997	.996	-0.080	25.730	20.900	2069.345
60	1.1711	1.153	98.27	69.31	.998	.996	-0.057	25.753	20.909	2157.976
61	1.2193	1.201	98.35	69.33	.999	.996	-0.036	25.774	20.891	2246.792
62	1.2669	1.247	98.44	69.25	1.000	.999	-0.012	25.798	20.961	2334.501
63	1.3148	1.295	98.51	69.21	1.000	.999	-0.005	25.815	20.953	2422.764
64	1.3633	1.342	98.45	69.21	1.000	1.001	-0.009	25.801	20.994	2512.132
65	1.4111	1.389	98.50	69.23	1.000	1.000	-0.004	25.814	20.980	2600.211
66	1.4568	1.436	98.45	69.22	1.000	1.000	-0.010	25.800	20.985	2688.105
67	1.5070	1.484	98.52	69.22	1.000	1.000	-0.010	25.820	20.985	2776.920
68	1.5232	1.894	98.45	69.19	1.000	1.001	-0.009	25.801	21.009	3543.829
69	2.3403	2.304	98.47	69.17	1.000	1.002	-0.005	25.805	21.029	4312.396
70	2.7573	2.715	98.44	69.20	1.000	1.001	-0.011	25.799	21.004	5080.779
71	3.1730	3.124	98.49	69.20	1.000	1.001	-0.001	25.811	21.004	5846.766
72	3.5903	3.535	98.51	69.21	1.000	1.001	-0.007	25.817	20.994	6615.701
73	4.0070	3.945	98.49	69.27	1.000	0.998	0.002	25.812	20.940	7383.531

Table 43.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 18. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+ = 35
FREE STREAM VELOCITY =	98.488	98.488
FREE STREAM TEMPERATURE =	69.395	
WALL TEMPERATURE =	93.500	
WALL HEAT FLUX =	.07709	
FREE STREAM DENSITY =	.07654	
FREE STREAM KINEMATIC VISCOSITY =	.0001596	
DENSITY OF FLUID AT WALL =	.07320	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001727	
WALL/FREE STREAM DENSITY RATIO =	.95642	
LOCATION REYNOLDS NUMBER (REX) =	3096018.69	
INPUT VALUE OF VELOCITY DELTA =	1.25000	
INPUT VALUE OF TEMPERATURE DELTA =	1.25000	
CALCULATED DELTA =		1.01017
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.14473	.14459
MOMENTUM THICKNESS (THETA) =	.10257	.10294
ENERGY-DISSIPATION THICKNESS =	.18290	.18323
ENTHALPY THICKNESS =	.00449	.00451
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.41101	1.40455
SHAPE FACTOR 32 (ENERGY/THETA) =	1.78314	1.77993
MOMENTUM THICKNESS REYNOLDS NUMBER =	5275.08	5294.28
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	7443.21	7436.09
SKIN FRICTION COEFFICIENT =	.002873	
FRICTION VELOCITY =	3.81720	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.49982
CLAUSERS 'DELTA' INTEGRAL =	-3.41363	-3.61429
CLAUSERS 'G' INTEGRAL =	24.42372	24.06157
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.13627	.14008
MOMENTUM THICKNESS - CONSTANT DENSITY =	.10355	.10394
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.31603	1.34775
LOCATION -X- =	60.20000	
Z = -6 INCHES		

Table 44.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 18. GRID NO. 2

REDUCED PPOFILE DATA

N	Y INCHES	Y/	U	T	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0079	.008	40.96	84.11	.416	.390	-15.071	10.730	8.168	14.609
2	.0089	.009	42.75	83.47	.434	.416	-14.601	11.200	8.129	16.451
3	.0103	.010	45.53	82.86	.462	.441	-13.874	11.927	9.256	19.030
4	.0110	.011	46.52	82.63	.472	.451	-13.613	12.188	9.457	20.320
5	.0119	.012	47.80	82.31	.485	.461	-13.279	12.522	9.736	21.978
6	.0138	.014	49.90	81.83	.507	.484	-12.729	13.072	10.150	22.478
7	.0153	.015	51.02	81.46	.518	.499	-12.436	13.366	10.473	22.824
8	.0160	.016	51.45	81.31	.522	.506	-12.323	13.478	10.602	22.953
9	.0179	.018	52.77	80.99	.536	.519	-11.976	13.826	10.881	23.031
10	.0201	.020	53.63	80.49	.544	.540	-11.753	14.048	11.314	23.708
11	.0222	.022	54.57	80.44	.554	.542	-11.505	14.296	11.365	24.113
12	.0237	.023	55.51	80.26	.559	.549	-11.390	14.412	11.519	24.371
13	.0251	.025	55.49	79.94	.563	.563	-11.265	14.536	11.800	24.629
14	.0269	.027	55.97	79.75	.568	.570	-11.138	14.663	11.958	24.961
15	.0293	.029	56.81	79.56	.577	.578	-10.919	14.883	12.129	25.033
16	.0312	.031	57.37	79.42	.583	.584	-10.772	15.029	12.246	25.753
17	.0328	.032	57.60	79.32	.585	.588	-10.711	15.090	12.339	26.048
18	.0341	.034	59.06	78.81	.600	.610	-10.323	15.478	12.783	26.208
19	.0461	.046	60.44	78.28	.614	.631	-9.967	15.834	13.242	26.498
20	.0530	.052	61.81	78.02	.628	.642	-9.609	16.193	13.463	26.794
21	.0590	.058	62.93	77.89	.638	.648	-9.343	16.459	13.582	26.848
22	.0659	.065	63.64	77.71	.646	.655	-9.129	16.672	13.733	27.145
23	.0731	.072	64.74	77.39	.657	.669	-8.841	16.961	14.019	27.472
24	.0791	.078	65.42	77.15	.664	.678	-8.664	17.137	14.227	27.777
25	.0859	.085	66.46	76.94	.675	.687	-8.391	17.410	14.404	28.030
26	.0933	.092	66.92	76.75	.679	.695	-8.269	17.532	14.570	28.193
27	.0991	.098	67.59	76.64	.686	.699	-8.095	17.706	14.666	28.262
28	.1063	.105	68.14	76.39	.692	.710	-7.951	17.850	14.888	28.586
29	.1131	.112	69.09	76.25	.701	.716	-7.702	18.099	15.008	28.841
30	.1190	.118	69.46	76.18	.705	.719	-7.603	18.198	15.072	29.128
31	.1261	.125	69.96	76.00	.710	.726	-7.474	18.327	15.224	29.362
32	.1331	.132	70.57	75.82	.717	.733	-7.313	18.489	15.379	29.558
33	.1501	.149	71.71	75.60	.728	.742	-7.016	18.785	15.568	29.756
34	.1677	.166	73.33	75.43	.745	.750	-6.591	19.211	15.723	30.899
35	.1849	.183	74.04	75.05	.752	.765	-6.406	19.395	16.047	34.068
36	.2031	.201	75.34	74.67	.765	.781	-6.065	19.736	16.378	37.421
37	.2199	.218	76.24	74.33	.774	.795	-5.828	19.973	16.677	40.516
38	.2381	.236	77.13	74.35	.783	.794	-5.595	20.206	16.656	43.869
39	.2551	.253	78.14	74.24	.793	.799	-5.331	20.470	16.752	47.001
40	.2729	.270	78.94	73.83	.802	.816	-5.120	20.681	17.109	50.280
41	.2902	.287	79.96	73.71	.812	.821	-4.854	20.947	17.218	53.467
42	.3061	.305	80.51	73.33	.817	.837	-4.711	21.091	17.550	56.7650
43	.3562	.353	82.91	72.98	.842	.851	-4.081	21.720	17.849	656.262
44	.4039	.400	84.83	72.61	.861	.867	-3.578	22.223	18.175	18.635
45	.4521	.448	86.74	72.08	.881	.889	-3.078	22.723	18.635	832.933
46	.5003	.495	88.35	71.73	.897	.903	-2.656	23.145	18.936	921.730
47	.5479	.542	89.85	71.43	.912	.916	-2.263	23.539	19.199	1009.420
48	.5963	.590	91.33	71.01	.927	.933	-1.875	23.926	19.563	1098.585
49	.6430	.637	92.74	70.90	.942	.937	-1.505	24.296	19.657	1186.276
50	.6920	.685	93.78	70.62	.952	.949	-1.234	24.567	19.902	1274.888
51	.7400	.733	94.82	70.38	.963	.959	-0.962	24.839	20.114	1363.315
52	.7880	.780	95.59	70.04	.971	.973	-0.760	25.041	20.405	1451.743
53	.8359	.828	96.35	69.98	.978	.976	-0.560	25.242	20.459	1539.986
54	.8841	.875	96.92	69.87	.984	.981	-0.410	25.391	20.559	1628.782
55	.9320	.923	97.33	69.73	.988	.986	-0.302	25.499	20.677	1717.026
56	.9799	.970	97.63	69.65	.991	.991	-0.224	25.577	20.789	1805.269
57	1.0261	1.018	97.95	69.47	.995	.997	-0.141	25.660	20.901	1894.065
58	1.0759	1.065	98.09	69.44	.996	.998	-0.105	25.696	20.932	1982.125
59	1.1239	1.113	98.25	69.42	.998	.999	-0.063	25.738	20.945	2070.552
60	1.1722	1.160	98.39	69.40	.999	1.000	-0.025	25.776	20.962	2159.533
61	1.2201	1.206	98.43	69.36	.999	1.002	-0.016	25.785	21.002	2224.776
62	1.2683	1.256	98.43	69.34	.999	1.002	-0.015	25.786	21.014	2336.572
63	1.3158	1.303	98.46	69.45	1.000	1.000	-0.007	25.795	20.926	24.24.079
64	1.3639	1.350	98.57	69.39	1.000	1.000	-0.001	25.823	20.971	2512.691
65	1.4120	1.398	98.55	69.39	1.000	1.000	-0.001	25.820	20.959	2601.303
66	1.4597	1.445	98.56	69.41	1.000	1.000	-0.001	25.817	20.970	2777.974
67	1.5079	1.493	98.55	69.40	1.000	1.000	-0.001	25.822	20.979	3544.715
68	1.59241	1.505	98.57	69.38	1.000	1.000	-0.001	25.811	20.993	4312.562
69	2.3409	2.317	98.52	69.37	1.000	1.000	-0.001	25.839	20.974	5080.776
70	2.7579	2.730	98.63	69.39	1.000	1.000	-0.001	25.834	20.974	5847.705
71	3.1742	3.142	98.61	69.39	1.000	1.000	-0.002	25.851	20.939	6615.735
72	3.5911	3.555	98.68	69.43	1.000	1.000	-0.002	25.840	20.935	7383.766
73	4.0060	3.968	98.64	69.44	1.000	1.000	-0.039	25.840	20.935	7383.766

Table 44.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 20. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $y^+ = 35$
FREE STREAM VELOCITY	= 98.701	98.701
FREE STREAM TEMPERATURE	= 69.924	
WALL TEMPERATURE	= 94.910	
WALL HEAT FLUX	= .07621	
FREE STREAM DENSITY	= .07626	
FREE STREAM KINEMATIC VISCOSITY	= .0001603	
DENSITY OF FLUID AT WALL	= .07283	
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001739	
WALL/FREE STREAM DENSITY RATIO	= .95495	
LOCATION REYNOLDS NUMBER (REX)	= 3906010.28	
INPUT VALUE OF VELOCITY DELTA	= 1.46000	
INPUT VALUE OF TEMPERATURE DELTA	= 1.61000	
CALCULATED DELTA		1.26107
DELTA 99.5% INPUT	= .00000	
DISPLACEMENT THICKNESS (DELSTAR)	= .17474	.17468
MOMENTUM THICKNESS (THETA)	= .12459	.12491
ENERGY-DISSIPATION THICKNESS	= .22258	.22284
ENTHALPY THICKNESS	= .00617	.00618
SHAPE FACTOR 12 (DELSTAR/THETA)	= 1.40254	1.39846
SHAPE FACTOR 32 (ENERGY/THETA)	= 1.78655	1.78405
MOMENTUM THICKNESS REYNOLDS NUMBER	= 6392.96	6409.56
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 8966.38	8963.54
SKIN FRICTION COEFFICIENT	= .002788	
FRICTION VELOCITY	= 3.77112	
LAW OF THE WALL CONSTANT (K)	= .41000	
LAW OF THE WALL CONSTANT (C)	= 5.00000	
WAKE STRENGTH		.47472
CLAUSERS 'DELTA' INTEGRAL	= -4.21251	-4.41046
CLAUSERS 'G' INTEGRAL	= 29.27316	28.99472
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .16476	.16851
MOMENTUM THICKNESS - CONSTANT DENSITY	= .12585	.12619
SHAPE FACTOR 12 - CONSTANT DENSITY	= 1.30925	1.33543
LOCATION -X-	76.12000	
Z = CENTERLINE		

Table 45.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79
 RUN NO. 7. POINT 2D. GRID NO. 2

REDUCED PROFILE DATA

N	Y/ INCHES	Y/ DELT A	U/ FT/SEC	T/ DEG.F	U/UE	THE T A	U-UE	U(+)	T(+)	Y(+)
1	.0076	.006	39.57	85.97	.401	.358	-15.680	10.493	7.729	13.788
2	.0087	.007	41.67	85.31	.424	.384	-15.071	11.102	8.302	15.776
3	.0096	.008	44.02	84.27	.446	.406	-14.499	11.674	8.771	17.402
4	.0108	.009	45.81	84.23	.464	.427	-14.026	12.147	9.238	19.571
5	.0116	.009	46.97	83.95	.476	.439	-13.717	12.456	9.479	21.017
6	.0134	.011	48.92	83.39	.496	.461	-13.201	12.972	9.961	24.269
7	.0146	.012	49.73	83.05	.504	.475	-12.986	13.187	10.261	26.438
8	.0156	.012	50.98	82.76	.517	.486	-12.654	13.519	10.511	28.245
9	.0180	.014	51.91	82.17	.526	.510	-12.408	13.765	11.020	32.582
10	.0200	.016	53.01	82.05	.537	.515	-12.115	14.058	11.123	36.196
11	.0216	.017	53.41	81.70	.541	.529	-12.010	14.163	11.428	39.088
12	.0234	.019	54.15	81.34	.549	.543	-11.814	14.359	11.737	42.340
13	.0248	.020	54.75	81.30	.555	.545	-11.665	14.518	11.771	44.870
14	.0268	.021	55.25	81.23	.560	.548	-11.523	14.650	11.834	48.485
15	.0266	.023	56.11	81.09	.566	.553	-11.294	14.879	11.956	51.737
16	.0310	.025	56.60	80.83	.573	.564	-11.163	15.010	12.178	56.074
17	.0325	.026	57.04	80.65	.578	.571	-11.047	15.126	12.337	58.785
18	.0340	.031	58.42	79.92	.582	.600	-10.681	15.491	12.964	70.531
19	.0462	.037	59.61	79.75	.604	.607	-10.367	15.806	13.114	83.542
20	.0529	.042	60.98	79.38	.618	.622	-10.002	16.171	13.432	95.650
21	.0590	.047	61.78	79.26	.626	.626	-9.790	16.383	13.531	106.673
22	.0657	.052	62.93	78.83	.638	.644	-9.486	16.686	13.908	118.781
23	.0728	.056	63.52	78.69	.644	.649	-9.329	16.844	14.028	131.611
24	.0790	.063	64.65	78.55	.655	.655	-9.030	17.142	14.148	142.815
25	.0858	.068	65.28	78.23	.661	.668	-8.863	17.310	14.426	155.104
26	.0931	.074	65.99	78.02	.669	.676	-8.675	17.498	14.606	168.296
27	.0986	.078	66.29	77.98	.672	.678	-8.595	17.578	14.641	178.235
28	.1056	.084	67.15	77.83	.680	.684	-8.367	17.806	14.770	190.884
29	.1130	.090	67.65	77.59	.685	.693	-8.233	17.940	14.978	204.257
30	.1190	.094	68.15	77.45	.690	.699	-8.102	18.071	15.100	221.749
31	.1260	.100	68.78	77.37	.697	.702	-7.934	18.239	15.168	227.749
32	.1332	.106	69.28	77.26	.702	.706	-7.802	18.371	15.261	240.760
33	.1498	.119	70.51	76.96	.714	.719	-7.476	18.697	15.528	270.758
34	.1674	.133	71.74	76.69	.727	.729	-7.149	19.024	15.760	302.563
35	.1847	.146	72.47	76.43	.734	.740	-6.957	19.216	15.985	333.826
36	.2031	.161	73.80	76.04	.748	.755	-6.602	19.571	16.322	367.077
37	.2197	.174	74.52	75.83	.755	.764	-6.412	19.761	16.502	397.075
38	.2380	.189	75.14	75.75	.761	.767	-6.246	19.926	16.572	430.145
39	.2553	.202	76.15	75.53	.772	.776	-5.979	20.194	16.763	461.408
40	.2732	.217	77.01	75.31	.780	.784	-5.752	20.421	16.952	493.755
41	.2898	.230	77.71	75.08	.787	.794	-5.565	20.608	17.154	523.753
42	.3077	.244	78.57	74.99	.796	.797	-5.388	20.835	17.229	556.100
43	.3595	.285	80.42	74.42	.815	.820	-4.848	21.325	17.718	649.708
44	.4108	.326	82.45	74.20	.825	.829	-4.309	21.864	17.911	742.412
45	.4632	.367	84.06	73.54	.852	.855	-3.883	22.290	18.484	837.104
46	.5150	.408	85.89	73.17	.870	.870	-3.398	22.775	18.799	930.712
47	.5672	.450	87.36	72.96	.885	.879	-3.001	23.172	18.988	1025.043
48	.6193	.491	88.70	72.52	.899	.896	-2.653	23.520	19.363	1119.193
49	.6705	.532	90.12	72.26	.913	.907	-2.276	23.896	19.590	1211.717
50	.7225	.573	91.49	71.98	.927	.918	-1.913	24.260	19.834	1305.686
51	.7737	.614	92.47	71.75	.937	.927	-1.653	24.520	20.030	1398.210
52	.8256	.655	93.70	71.54	.949	.935	-1.325	24.848	20.210	1491.999
53	.8776	.696	94.57	71.17	.958	.950	-1.095	25.078	20.529	1585.968
54	.9301	.738	95.44	71.00	.967	.957	-864	25.309	20.680	1680.841
55	.9816	.778	95.98	70.81	.972	.964	-721	25.452	20.842	1773.907
56	1.0334	.819	96.60	70.77	.979	.966	-557	25.616	20.880	1867.515
57	1.0848	.860	97.13	70.52	.984	.976	-417	25.756	21.097	1960.400
58	1.1372	.902	97.55	70.41	.988	.981	-306	25.867	21.392	2055.092
59	1.1890	.943	97.75	70.34	.990	.983	-251	25.922	21.525	2148.700
60	1.2409	.984	97.99	70.21	.993	.989	-188	25.985	21.365	2242.489
61	1.2926	1.025	98.26	70.22	.996	.988	-116	26.057	21.357	2335.916
62	1.3446	1.066	98.38	70.13	.997	.992	-86	26.087	21.430	2429.885
63	1.3965	1.107	98.54	70.11	.998	.993	-42	26.131	21.450	2523.674
64	1.4481	1.148	98.66	70.03	1.000	.996	-10	26.163	21.519	2616.920
65	1.5000	1.189	98.60	70.00	1.000	.999	-27	26.146	21.542	2710.709
66	1.5520	1.231	98.71	69.97	1.000	.998	-303	26.176	21.572	2804.678
67	1.6038	1.272	98.79	69.92	1.000	1.000	-24	26.197	21.612	2898.286
68	1.6556	1.313	98.75	69.90	1.000	1.001	-13	26.186	21.632	2991.894
69	1.7078	1.354	98.82	69.97	1.000	1.000	-32	26.205	21.571	3086.225
70	2.0908	1.658	98.83	69.91	1.000	1.001	-35	26.208	21.626	3778.346
71	2.4742	1.962	98.80	69.89	1.000	1.001	-25	26.198	21.640	3471.189
72	2.8576	2.266	98.77	69.90	1.000	1.001	-19	26.191	21.630	5164.032
73	3.2468	2.570	98.72	69.89	1.000	1.001	-05	26.178	21.640	5856.514
74	3.6239	2.874	98.79	69.86	1.000	1.003	-23	26.195	21.664	6548.816
75	4.0082	3.178	98.85	69.88	1.002	1.002	-39	26.212	21.644	7243.285

Table 45.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 22. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	SUBLAYER FUNCTION FROM WALL TO $Y+ = 35$	STANDARD
FREE STREAM VELOCITY	= 99.029		99.029
FREE STREAM TEMPERATURE	= 70.362		
WALL TEMPERATURE	= 95.150		
WALL HEAT FLUX	= .07618		
FREE STREAM DENSITY	= .07620		
KINEMATIC VISCOSITY	= .0001605		
DENSITY OF FLUID AT WALL	= .07279		
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001740		
WALL/FREE STREAM DENSITY RATIO	= .95532		
LOCATION REYNOLDS NUMBER (REX)	= 3916335.69		
INPUT VALUE OF VELOCITY DELTA	= 1.46000		
INPUT VALUE OF TEMPERATURE DELTA	= 1.46000		
CALCULATED DELTA			1.25258
DELTA 99.5% INPUT	= .00000		
DISPLACEMENT THICKNESS (DELSTAR)	= .17622		.17616
MOMENTUM THICKNESS (THETA)	= .12591		.12618
ENERGY-DISSIPATION THICKNESS	= .22485		.22507
ENTHALPY THICKNESS	= .00581		.00582
SHAPE FACTOR 12 (DELSTAR/THETA)	= 1.39963		1.39603
SHAPE FACTOR 32 (ENERGY/THETA)	= 1.78580		1.78369
MOMENTUM THICKNESS REYNOLDS NUMBER	= 6472.77		6486.96
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 9059.48		9055.97
SKIN FRICTION COEFFICIENT	= .002763		
FRICTION VELOCITY	= 3.76592		
LAW OF THE WALL CONSTANT (K)	= .41000		
LAW OF THE WALL CONSTANT (C)	= 5.00000		
WAKE STRENGTH			.50443
CLAUSERS 'DELTA' INTEGRAL	= -4.29370		-4.47914
CLAUSERS 'G' INTEGRAL	= 29.92349		29.66955
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .16685		.17033
MOMENTUM THICKNESS - CONSTANT DENSITY	= .12714		.12743
SHAPE FACTOR 12 - CONSTANT DENSITY	= 1.31233		1.33672

LOCATION -X- 76.18001

Z = -6 INCHES

Table 46.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 22. GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y/	U	T	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0071	.006	38.31	86.56	.367	.346	-16.123	10.173	7.416	12.857
2	.0083	.007	40.31	85.64	.407	.384	-15.591	10.705	8.215	15.021
3	.0097	.008	42.91	85.13	.433	.404	-14.903	11.393	8.657	17.545
4	.0106	.008	44.64	84.61	.451	.425	-14.441	11.855	9.107	19.168
5	.0116	.009	46.41	84.25	.469	.440	-13.974	12.324	9.417	20.972
6	.0130	.010	47.91	83.99	.484	.450	-13.574	12.722	9.637	23.496
7	.0143	.011	49.15	83.73	.496	.461	-13.244	13.052	9.859	25.840
8	.0156	.012	50.16	83.32	.507	.477	-12.976	13.320	10.213	28.185
9	.0173	.014	51.26	82.77	.518	.499	-12.685	13.612	10.693	31.250
10	.0195	.016	52.37	82.38	.529	.515	-12.389	13.907	11.026	35.217
11	.0214	.017	53.45	81.93	.540	.533	-12.102	14.194	11.415	38.643
12	.0230	.018	54.50	81.78	.546	.539	-11.942	14.354	11.545	41.529
13	.0245	.020	54.22	81.69	.548	.543	-11.899	14.397	11.621	44.233
14	.0267	.021	54.97	81.41	.555	.554	-11.700	14.597	11.864	48.200
15	.0285	.023	55.65	81.09	.562	.567	-11.519	14.777	12.144	51.446
16	.0303	.024	56.18	80.64	.567	.585	-11.379	14.917	12.534	54.692
17	.0320	.026	56.61	80.47	.572	.592	-11.264	15.032	12.679	57.758
18	.0338	.031	57.85	80.49	.584	.592	-10.933	15.363	12.663	69.298
19	.0455	.036	59.48	80.08	.601	.608	-10.502	15.794	13.015	82.101
20	.0523	.028	60.45	79.65	.610	.625	-10.243	16.053	13.389	94.363
21	.0655	.027	61.48	79.28	.621	.640	-9.970	16.326	13.710	105.543
22	.0655	.052	62.77	79.13	.634	.646	-9.628	16.668	13.834	118.166
23	.0724	.056	63.55	78.98	.642	.652	-9.420	16.876	13.965	130.608
24	.0782	.062	64.26	78.85	.649	.658	-9.233	17.064	14.077	141.067
25	.0851	.068	65.16	78.51	.658	.671	-8.988	17.306	14.372	153.509
26	.0922	.074	65.91	78.29	.666	.680	-8.795	17.501	14.557	166.312
27	.0983	.079	66.38	78.18	.670	.684	-8.670	17.626	14.652	177.312
28	.1053	.084	66.90	78.09	.676	.688	-8.530	17.766	14.735	189.935
29	.1123	.090	67.60	77.83	.683	.699	-8.346	17.950	14.961	202.557
30	.1184	.095	68.30	77.72	.690	.703	-8.161	18.135	15.054	213.557
31	.1252	.100	68.97	77.67	.696	.705	-7.991	18.305	15.093	225.819
32	.1321	.105	69.36	77.60	.701	.708	-7.872	18.424	15.160	236.261
33	.1493	.119	70.41	77.10	.711	.728	-7.599	18.697	15.589	269.277
34	.1669	.133	71.73	76.94	.724	.735	-7.250	19.046	15.725	301.014
35	.1844	.147	72.70	76.72	.734	.743	-6.991	19.305	15.914	332.571
36	.2023	.162	73.85	76.43	.746	.755	-6.687	19.610	16.171	364.849
37	.2196	.175	74.45	76.07	.752	.770	-6.526	19.771	16.482	396.045
38	.2373	.189	75.32	76.10	.761	.769	-6.297	19.999	16.456	427.962
39	.2546	.203	76.00	75.96	.767	.774	-6.116	20.180	16.577	459.158
40	.2721	.217	76.80	75.71	.776	.784	-5.903	20.393	16.791	490.714
41	.2895	.231	77.93	75.33	.787	.799	-5.603	20.693	17.114	522.091
42	.3071	.245	78.75	75.19	.795	.805	-5.385	20.911	17.240	553.828
43	.3569	.287	80.84	74.82	.816	.820	-4.830	21.466	17.556	647.235
44	.4105	.326	82.47	74.26	.833	.843	-4.398	21.898	18.038	740.282
45	.4625	.369	84.36	73.79	.852	.862	-3.890	22.407	18.444	834.050
46	.5141	.410	86.66	73.64	.869	.868	-3.445	22.851	18.573	927.097
47	.5664	.452	87.65	73.26	.885	.883	-3.021	23.275	18.906	1021.406
48	.6186	.494	88.82	72.92	.897	.897	-2.710	23.586	19.202	1115.535
49	.6699	.535	90.39	72.52	.913	.913	-2.293	24.003	19.545	1208.041
50	.7219	.576	91.54	72.27	.924	.923	-1.990	24.307	19.760	1301.809
51	.7737	.618	92.60	72.10	.935	.930	-1.707	24.590	19.908	1395.217
52	.8255	.659	93.80	71.75	.947	.944	-1.388	24.908	20.205	1488.625
53	.8775	.701	94.74	71.61	.957	.949	-1.138	25.158	20.327	1882.393
54	.9293	.742	95.47	71.32	.964	.961	-0.944	25.352	20.577	1675.800
55	.9811	.783	96.20	71.10	.971	.970	-0.751	25.545	20.770	1769.208
56	1.0329	.825	96.69	71.01	.976	.974	-0.621	25.675	20.845	1862.615
57	1.0845	.866	97.23	70.83	.982	.981	-0.478	25.818	21.005	1955.662
58	1.1363	.907	97.71	70.77	.987	.984	-0.350	25.946	21.060	2049.070
59	1.1887	.949	98.02	70.60	.990	.990	-0.268	26.028	21.200	2143.559
60	1.2403	1.032	98.32	70.52	.993	.994	-0.188	26.108	21.275	2236.606
61	1.2923	1.073	98.57	70.56	.995	.992	-0.123	26.173	21.356	2330.375
62	1.3443	1.073	98.75	70.42	.997	.998	-0.073	26.223	21.421	2424.143
63	1.3959	1.114	98.80	70.41	.998	.998	-0.062	26.234	21.452	2517.190
64	1.4472	1.155	99.00	70.36	1.000	1.000	-0.068	26.288	21.472	2609.696
65	1.4993	1.197	99.00	70.37	1.000	1.000	-0.068	26.288	21.495	2703.644
66	1.5513	1.239	99.01	70.38	1.000	1.000	-0.065	26.291	21.503	2797.413
67	1.6035	1.280	99.08	70.34	1.000	1.001	-0.063	26.309	21.426	2891.541
68	1.6555	1.322	99.12	70.33	1.001	1.001	-0.063	26.319	21.435	2985.310
69	1.7073	1.363	99.15	70.35	1.001	1.001	-0.063	26.329	21.420	3078.717
70	2.0905	1.669	99.18	70.32	1.002	1.001	-0.060	26.336	21.440	3769.717
71	2.4731	1.974	99.18	70.30	1.001	1.002	-0.059	26.335	21.459	4459.634
72	2.8573	2.281	99.19	70.35	1.002	1.000	-0.042	26.338	21.416	5152.437
73	3.2405	2.587	99.12	70.40	1.001	1.001	-0.048	26.319	21.372	5843.437
74	3.6235	2.893	99.09	70.41	1.001	1.001	-0.046	26.312	21.363	6534.076
75	4.0076	3.199	99.16	70.46	1.001	1.001	-0.035	26.331	21.324	7226.698

Table 46.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 23. GRID NO. 2

BOUNDARY LAYER PROPERTIES

LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y^+=35$
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FREE STREAM VELOCITY	=	99.035	99.035
FREE STREAM TEMPERATURE	=	70.193	
WALL TEMPERATURE	=	95.200	
WALL HEAT FLUX	=	.07713	
FREE STREAM DENSITY	=	.07622	
FREE STREAM KINEMATIC VISCOSITY	=	.0001604	
DENSITY OF FLUID AT WALL	=	.07279	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.0001741	
WALL/FREE STREAM DENSITY RATIO	=	.95493	
LOCATION REYNOLDS NUMBER (REX)	=	4326174.37	
INPUT VALUE OF VELOCITY DELTA	=	1.62000	
INPUT VALUE OF TEMPERATURE DELTA	=	1.62000	
CALCULATED DELTA			1.37953
DELTA 99.5% INPUT	=	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	=	.19050	.19030
MOMENTUM THICKNESS (THETA)	=	.13632	.13674
ENERGY-DISSIPATION THICKNESS	=	.24394	.24432
ENTHALPY THICKNESS	=	.00665	.00667
SHAPE FACTOR 12 (DELSTAR/THETA)	=	1.39740	1.39174
SHAPE FACTOR 32 (ENERGY/THETA)	=	1.78940	1.78677
MOMENTUM THICKNESS REYNOLDS NUMBER	=	7012.60	7033.93
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	9799.43	9789.39
SKIN FRICTION COEFFICIENT	=	.002737	
FRICITION VELOCITY	=	3.74884	
LAW OF THE WALL CONSTANT (K)	=	.41000	
LAW OF THE WALL CONSTANT (C)	=	5.00000	
WAKE STRENGTH	=		.48337
CLAUSERS 'DELTA' INTEGRAL	=	-4.62878	-4.85118
CLAUSERS 'G' INTEGRAL	=	32.20997	31.75946
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.17953	.18364
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.13769	.13813
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.30386	1.32947

LOCATION -X- 84.10001

Z = CENTERLINE

Table 47.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 23. GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG. F	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0086	.006	41.82	85.72	.422	.379	-15.262	11.155	.050	15.489
2	.0102	.007	43.60	85.06	.440	.405	-14.766	11.152	.609	18.361
3	.0108	.008	44.40	84.90	.448	.412	-14.574	11.844	.745	19.437
4	.0116	.008	45.73	84.55	.462	.426	-14.218	12.200	.040	20.873
5	.0129	.009	47.25	83.93	.477	.451	-13.814	12.603	.572	23.206
6	.0144	.010	49.07	83.51	.495	.467	-13.328	13.089	.926	25.899
7	.0161	.012	50.14	83.21	.506	.479	-13.043	13.375	.222	28.950
8	.0170	.012	50.73	83.08	.512	.485	-12.885	13.512	.292	30.565
9	.0187	.014	51.65	82.70	.521	.500	-12.641	13.777	.611	33.616
10	.0206	.015	52.63	82.38	.531	.513	-12.378	14.039	.83	37.385
11	.0233	.017	53.46	82.29	.540	.516	-12.156	14.261	.961	41.872
12	.0244	.018	53.89	82.06	.544	.520	-12.042	14.375	1.153	43.846
13	.0262	.019	54.40	81.74	.549	.538	-11.906	14.512	1.431	47.077
14	.0282	.020	54.92	81.49	.555	.548	-11.767	14.651	1.638	50.666
15	.0298	.022	55.71	81.33	.562	.554	-11.558	14.859	1.772	53.538
16	.0322	.023	56.09	81.14	.566	.566	-11.455	14.962	11.936	57.845
17	.0335	.024	56.72	81.06	.573	.575	-11.017	15.401	12.210	60.179
18	.0397	.029	57.73	80.62	.583	.592	-10.575	15.842	12.579	63.870
19	.0467	.034	59.39	80.39	.600	.612	-10.261	16.157	12.997	67.330
20	.0542	.039	60.57	79.89	.612	.621	-10.051	16.366	13.192	107.381
21	.0596	.043	61.35	79.66	.620	.630	-9.774	16.644	13.377	119.586
22	.0666	.048	62.39	79.44	.630	.638	-9.503	16.914	13.536	132.508
23	.0738	.054	63.41	79.26	.640	.646	-9.362	17.055	13.756	143.097
24	.0797	.058	63.94	79.00	.646	.655	-9.120	17.298	13.910	155.481
25	.0866	.063	64.85	78.82	.655	.664	-8.847	17.570	14.097	169.121
26	.0942	.068	65.87	78.60	.665	.665	-8.687	17.730	14.122	179.172
27	.0998	.072	66.47	78.57	.671	.677	-8.511	17.806	14.374	191.915
28	.1069	.076	66.75	78.27	.674	.682	-8.480	17.937	14.515	203.940
29	.1136	.082	67.24	78.15	.679	.684	-8.317	18.100	14.623	214.708
30	.1196	.087	67.85	78.10	.685	.689	-8.148	18.269	14.769	227.990
31	.1270	.092	68.49	77.98	.692	.696	-7.961	18.427	15.071	240.733
32	.1341	.097	69.06	77.81	.698	.710	-7.604	18.813	15.208	302.473
33	.1512	.110	70.53	77.45	.712	.716	-7.371	19.046	15.409	333.861
34	.1685	.122	71.40	77.29	.721	.733	-7.149	19.269	15.569	355.638
35	.1860	.135	72.23	76.86	.729	.740	-6.885	19.560	15.907	366.726
36	.2043	.148	73.33	76.47	.740	.754	-6.618	19.800	16.008	397.057
37	.2212	.160	74.23	76.35	.750	.755	-6.424	19.994	16.040	428.645
38	.2388	.173	74.95	76.31	.757	.771	-6.123	20.295	16.366	459.874
39	.2562	.186	76.08	75.92	.768	.786	-6.039	20.379	16.682	491.103
40	.2736	.198	76.40	75.55	.771	.790	-5.918	20.600	16.782	522.153
41	.2909	.211	77.22	75.43	.780	.782	-5.653	20.764	16.809	554.638
42	.3090	.224	77.84	75.64	.786	.819	-5.090	21.328	17.391	646.889
43	.3604	.261	79.95	74.72	.807	.827	-4.663	21.754	17.566	738.961
44	.4117	.298	61.55	74.51	.823	.829	-4.200	22.217	17.593	832.828
45	.4645	.326	63.26	74.48	.841	.859	-3.783	22.634	18.229	925.617
46	.5157	.374	64.85	73.73	.857	.867	-3.370	23.047	18.416	1018.766
47	.5676	.411	66.40	73.51	.872	.882	-3.029	23.388	18.732	1112.274
48	.6197	.449	67.68	73.14	.885	.889	-2.694	23.724	18.869	1205.063
49	.6714	.487	68.94	72.98	.898	.909	-2.338	24.079	19.310	1298.391
50	.7234	.524	70.27	72.46	.912	.916	-2.014	24.404	19.444	1391.181
51	.7751	.562	71.49	72.30	.924	.928	-1.772	24.645	19.714	1484.330
52	.8270	.600	72.39	71.98	.933	.935	-1.497	24.921	19.856	1577.119
53	.8787	.637	73.42	71.81	.943	.946	-1.284	25.133	20.082	1670.268
54	.9306	.675	74.22	71.55	.951	.953	-1.077	25.340	20.235	1763.955
55	.9826	.712	75.00	71.37	.959	.955	-9.920	25.497	20.268	1856.565
56	1.0344	.750	76.56	71.33	.965	.967	-7.734	25.683	20.538	1948.458
57	1.0856	.787	76.28	71.01	.972	.967	-7.480	25.857	20.541	2042.683
58	1.1361	.825	76.93	71.01	.979	.977	-7.240	25.938	20.747	2135.832
59	1.1900	.863	77.24	70.76	.982	.977	-6.980	26.057	20.960	22228.980
60	1.2419	.900	77.68	70.51	.986	.987	-6.722	26.145	20.908	2322.847
61	1.2942	.938	78.01	70.58	.990	.985	-6.465	26.229	21.018	2415.457
62	1.3458	.976	78.33	70.45	.993	.990	-6.186	26.285	21.120	2508.067
63	1.3974	1.013	78.54	70.33	.995	.995	-6.132	26.311	21.134	2693.647
64	1.4488	1.050	78.63	70.36	.996	.993	-6.07	26.349	21.176	2786.616
65	1.5008	1.088	78.78	70.31	.997	.995	-6.068	26.380	21.206	2879.944
66	1.5526	1.125	78.89	70.26	.999	.997	-6.038	26.390	21.237	3067.318
67	1.6046	1.163	78.93	70.22	.999	.999	-6.028	26.424	21.268	4441.574
68	1.6571	1.201	79.02	70.23	1.000	1.000	-6.013	26.454	21.272	5130.587
69	1.7090	1.239	78.99	70.19	1.000	1.002	-6.002	26.425	21.272	5130.587
70	2.0920	1.516	99.10	70.16	1.000	1.000	-6.003	26.407	21.237	5130.587
71	2.4747	1.794	99.06	70.15	1.000	1.000	-6.001	26.424	21.258	5130.587
72	2.8566	2.072	99.00	70.15	1.000	1.000	-6.002	26.424	21.258	5130.587
73	3.2418	2.350	99.06	70.19	1.000	1.000	-6.003	26.424	21.258	5130.587
74	3.6247	2.628	99.06	70.24	1.000	1.000	-6.004	26.424	21.258	5130.587
75	4.0090	2.906	99.06	70.21	1.000	1.000	-6.005	26.425	21.220	7195.292

Table 47.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. . POINT 24. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y+=35$
FREE STREAM VELOCITY	= 99.030	99.030
FREE STREAM TEMPERATURE	= 69.615	
WALL TEMPERATURE	= 93.940	
WALL HEAT FLUX	= .07689	
FREE STREAM DENSITY	= .07631	
FREE STREAM KINEMATIC VISCOSITY	= .0001601	
DENSITY OF FLUID AT WALL	= .07295	
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001734	
WALL/FREE STREAM DENSITY RATIO	= .95606	
LOCATION REYNOLDS NUMBER (REX)	= 3520047.47	
INPUT VALUE OF VELOCITY DELTA	= 1.37000	
INPUT VALUE OF TEMPERATURE DELTA	= 1.40000	
CALCULATED DELTA	= 1.13831	
DELTA 99.5% INPUT	= .00000	
DISPLACEMENT THICKNESS (DELSTAR)	= .15888	.15897
MOMENTUM THICKNESS (THETA)	= .11329	.11350
ENERGY-DISSIPATION THICKNESS	= .20224	.20236
ENTHALPY THICKNESS	= .00540	.00541
SHAPE FACTOR 12 (DELSTAR/THETA)	= 1.40241	1.40060
SHAPE FACTOR 32 (ENERGY/THETA)	= 1.78514	1.78296
MOMENTUM THICKNESS REYNOLDS NUMBER	= 5838.69	5849.46
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 8188.25	8192.76
SKIN FRICTION COEFFICIENT	= .002839	
FRICTION VELOCITY	= 3.81592	
LAW OF THE WALL CONSTANT (K)	= .41000	
LAW OF THE WALL CONSTANT (C)	= 5.00000	.47315
WAKE STRENGTH	=	
CLAUSERS 'DELTA' INTEGRAL	= -3.81864	-3.98508
CLAUSERS 'G' INTEGRAL	= 26.30336	26.21169
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .15031	.15356
MOMENTUM THICKNESS - CONSTANT DENSITY	= .11442	.11464
SHAPE FACTOR 12 - CONSTANT DENSITY	= 1.31367	1.33949

LOCATION -X- 68.30000

Table 48.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79
 RUN NO. 7. POINT 24. GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y/	U	T	U/UE	THETA	UTAU	U(+)	U(-)	T(+)	T(-)	Y(+)
1	.0063	.006	37.29	85.93	.377	.329	-16.179	9.773	6.958	11.611	11.611	
2	.0077	.007	40.51	84.99	.409	.368	-15.335	10.616	7.779	14.179	14.179	
3	.0086	.008	42.77	84.32	.432	.396	-14.742	11.210	8.360	15.829	15.829	
4	.0106	.009	46.54	83.40	.454	.423	-14.164	11.788	8.942	17.847	17.847	
5	.0121	.011	48.39	82.88	.470	.433	-13.755	12.197	9.162	19.498	19.498	
6	.0136	.012	49.92	82.39	.504	.475	-12.872	12.680	9.608	22.249	22.249	
7	.0145	.013	50.76	82.21	.513	.482	-12.651	13.301	10.035	25.000	25.000	
8	.0168	.015	55.20	81.82	.526	.498	-12.302	13.650	10.534	26.651	26.651	
9	.0185	.016	59.23	81.38	.534	.513	-12.081	13.870	10.910	30.870	30.870	
10	.0208	.018	54.06	81.02	.546	.538	-11.688	14.167	11.224	38.207	38.207	
11	.0222	.020	54.43	80.86	.550	.540	-11.490	14.263	11.362	40.775	40.775	
12	.0239	.021	55.19	80.80	.557	.553	-11.394	14.462	11.420	43.893	43.893	
13	.0259	.023	55.76	80.49	.563	.563	-11.339	14.613	11.687	47.561	47.561	
14	.0277	.024	56.19	80.20	.567	.565	-11.225	14.726	11.942	50.863	50.863	
15	.0295	.026	56.60	80.01	.572	.573	-11.119	14.833	12.108	54.165	54.165	
16	.0311	.027	57.13	79.90	.577	.577	-10.979	14.973	12.201	57.099	57.099	
17	.0373	.033	58.58	79.58	.591	.590	-10.602	15.350	12.480	68.472	68.472	
18	.0443	.039	59.86	79.06	.605	.612	-10.264	15.686	12.932	81.311	81.311	
19	.0513	.045	61.34	78.64	.619	.629	-9.878	16.074	13.295	94.151	94.151	
20	.0573	.050	62.45	78.58	.631	.631	-9.567	16.365	13.546	105.156	105.156	
21	.0645	.057	63.64	78.35	.643	.641	-9.273	16.678	13.590	118.363	118.363	
22	.0713	.063	64.37	78.07	.650	.652	-9.064	16.868	13.788	130.835	130.835	
23	.0776	.068	65.23	77.97	.659	.656	-8.857	17.095	13.875	142.391	142.391	
24	.0847	.074	66.07	77.87	.667	.661	-8.637	17.314	13.963	155.414	155.414	
25	.0915	.080	66.80	77.56	.675	.673	-8.446	17.505	14.233	167.887	167.887	
26	.0975	.086	67.29	77.46	.679	.678	-8.319	17.633	14.324	178.892	178.892	
27	.1046	.092	68.15	77.39	.688	.680	-8.093	17.858	14.378	191.915	191.915	
28	.1115	.098	68.54	77.08	.692	.693	-7.990	17.962	14.654	204.571	204.571	
29	.1177	.103	69.25	76.89	.699	.701	-7.804	18.148	14.812	215.943	215.943	
30	.1243	.109	69.80	76.76	.705	.706	-7.660	18.292	14.929	228.049	228.049	
31	.1315	.116	70.41	76.62	.711	.712	-7.501	18.451	15.051	241.256	241.256	
32	.1483	.130	71.47	76.36	.722	.723	-7.223	18.728	15.279	272.071	272.071	
33	.1661	.146	72.55	76.00	.733	.738	-6.939	19.012	15.589	304.720	304.720	
34	.1833	.161	73.86	75.83	.746	.745	-6.596	19.356	15.739	336.269	336.269	
35	.2017	.177	74.94	75.56	.757	.756	-6.314	19.638	15.974	370.018	370.018	
36	.2185	.192	75.54	75.24	.763	.769	-6.156	19.796	16.251	400.833	400.833	
37	.2365	.208	76.59	74.93	.773	.782	-5.879	20.072	16.518	433.849	433.849	
38	.2533	.223	77.27	74.82	.780	.786	-5.701	20.538	16.614	464.664	464.664	
39	.2715	.239	78.37	74.52	.791	.798	-5.414	20.766	16.870	498.047	498.047	
40	.2886	.254	79.24	74.56	.800	.797	-5.186	20.964	17.072	529.413	529.413	
41	.3063	.269	80.00	74.29	.808	.806	-4.987	21.394	17.568	561.878	561.878	
42	.3543	.311	81.64	73.72	.824	.831	-4.558	21.942	17.854	649.921	649.921	
43	.4025	.354	83.73	73.39	.845	.845	-4.010	22.391	18.140	827.108	827.108	
44	.4509	.396	85.44	73.06	.863	.858	-3.561	22.790	18.530	914.600	914.600	
45	.4966	.438	86.96	72.61	.878	.877	-3.162	23.217	18.740	1090.459	1090.459	
46	.5465	.480	88.59	72.37	.895	.887	-2.735	23.635	19.115	1090.686	1090.686	
47	.5946	.522	90.19	71.94	.911	.904	-2.317	24.005	19.321	1178.912	1178.912	
48	.6427	.565	91.60	71.70	.925	.914	-1.947	24.287	19.672	1266.568	1266.568	
49	.6905	.607	92.68	71.30	.936	.931	-1.665	24.562	19.898	1354.631	1354.631	
50	.7385	.649	93.73	71.04	.946	.941	-1.390	24.849	20.051	1442.674	1442.674	
51	.7865	.691	94.82	70.87	.957	.949	-1.103	25.015	20.268	1530.533	1530.533	
52	.8344	.733	95.45	70.61	.964	.959	-9.37	25.222	20.378	1618.759	1618.759	
53	.8825	.775	96.25	70.52	.972	.963	-7.729	25.522	20.589	1706.802	1706.802	
54	.9305	.817	96.76	70.25	.977	.974	-5.89	25.830	20.641	1794.662	1794.662	
55	.9784	.866	97.38	70.18	.983	.977	-4.47	26.200	20.794	1882.888	1882.888	
56	.1.0265	.902	97.68	70.01	.986	.984	-3.55	26.597	20.858	2587.231	2587.231	
57	.1.0746	.944	98.11	69.94	.991	.987	-2.42	27.010	20.913	2656.723	2656.723	
58	.1.1223	.986	98.39	69.87	.994	.989	-1.67	27.578	20.977	2764.707	2764.707	
59	.1.1705	1.028	98.56	69.80	.995	.992	-1.23	28.829	21.069	3355.059	3355.059	
60	.1.2165	1.070	98.76	69.81	.997	.992	-0.70	29.882	21.162	3222.919	3222.919	
61	.1.2664	1.113	98.79	69.75	.998	.995	-0.62	29.889	21.022	3222.411	3222.411	
62	.1.3141	1.154	98.99	69.72	1.000	.996	-0.10	29.942	21.047	2241.990	2241.990	
63	.1.3625	1.197	99.01	69.67	1.000	.998	-0.05	29.947	21.092	2241.888	2241.888	
64	.1.4105	1.239	99.01	69.63	1.000	.999	-0.04	29.948	21.123	2587.231	2587.231	
65	.1.4582	1.281	99.04	69.62	1.000	1.000	-0.02	29.954	21.133	2674.723	2674.723	
66	.1.5068	1.324	99.04	69.60	1.000	1.001	-0.02	29.954	21.153	2763.867	2763.867	
67	.1.5835	1.637	99.07	69.56	1.000	1.000	-0.01	29.963	21.180	3418.135	3418.135	
68	.2.2203	1.951	99.10	69.64	1.001	1.000	-0.01	29.971	21.180	40728.323	40728.323	
69	.2.5778	2.265	99.05	69.61	1.000	1.000	-0.00	29.956	21.142	53862.591	53862.591	
70	.3.2913	2.891	99.09	69.57	1.001	1.002	-0.01	29.967	21.176	6037.043	6037.043	
71	.3.6492	3.206	99.10	69.59	1.001	1.001	-0.01	29.969	21.156	6693.512	6693.512	
72	.4.0065	3.520	99.05	69.61	1.000	1.000	-0.06	29.958	21.142	7348.881	7348.881	

Table 48.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 1. GRID NO. 3

BOUNDARY LAYER PROPERTIES

		LINEAR INTERPOLATION TO WALL	SUBLAYER FUNCTION FROM WALL TO $Y^+=35$	STANDARD
FREE STREAM VELOCITY	=	99.114		99.114
FREE STREAM TEMPERATURE	=	68.471		
WALL TEMPERATURE	=	84.850		
WALL HEAT FLUX	=	.07843		
FREE STREAM DENSITY	=	.07652		
FREE STREAM KINEMATIC VISCOSITY	=	.0001594		
DENSITY OF FLUID AT WALL	=	.07422		
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.0001683		
WALL/FREE STREAM DENSITY RATIO	=	.96992		
LOCATION REYNOLDS NUMBER (REX)	=	621769.25		
INPUT VALUE OF VELOCITY DELTA	=	.41000		
INPUT VALUE OF TEMPERATURE DELTA	=	.43000		
CALCULATED DELTA	=			.30842
DELTA 99.5% INPUT	=	.00000		
DISPLACEMENT THICKNESS (DELSTAR)	=	.03839		.03850
MOMENTUM THICKNESS (THETA)	=	.02723		.02744
ENERGY-DISSIPIATION THICKNESS	=	.04908		.04925
ENTHALPY THICKNESS	=	.00089		.00089
SHAPE FACTOR 12 (DELSTAR/THETA)	=	1.40996		1.40289
SHAPE FACTOR 32 (ENERGY/THETA)	=	1.80242		1.79471
MOMENTUM THICKNESS REYNOLDS NUMBER	=	1410.95		1421.84
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	1989.39		1994.68
SKIN FRICTION COEFFICIENT	=	.004289		
FRICTION VELOCITY	=	4.66028		
LAW OF THE WALL CONSTANT (K)	=	.41000		
LAW OF THE WALL CONSTANT (C)	=	5.00000		
WAKE STRENGTH	=			.05097
CLAUSERS 'DELTA' INTEGRAL	=	-.70358		-.79993
CLAUSEPS 'G' INTEGRAL	=	4.57104		4.51860
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.03530		.03761
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.02741		.02762
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.28792		1.36166

LOCATION -X- 12.00000

Z = CENTERLINE

Table 49.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 1. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/ INCHES	U FT/SEC	T DEG.F	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0044	.014	41.22	78.86	.416	.366	-12.422	8.845	6.337	10.225
2	.0061	.020	51.54	77.70	.520	.437	-10.208	11.059	7.572	14.148
3	.0074	.024	53.60	76.92	.541	.484	-9.767	11.501	8.395	17.149
4	.0084	.027	56.11	76.34	.566	.519	-9.229	12.039	9.005	19.457
5	.0104	.034	60.07	75.64	.606	.562	-8.378	12.889	9.748	24.073
6	.0124	.040	62.80	75.36	.634	.580	-7.792	13.476	10.050	28.689
7	.0145	.047	64.56	74.86	.651	.610	-7.415	13.853	10.573	33.536
8	.0162	.053	65.99	74.62	.666	.624	-7.107	14.361	10.826	37.460
9	.0174	.057	66.45	74.50	.670	.632	-7.009	14.259	10.950	40.229
10	.0195	.063	67.27	74.20	.679	.650	-6.833	14.035	11.276	45.076
11	.0215	.070	68.47	73.98	.691	.664	-6.575	14.693	11.503	49.692
12	.0235	.076	69.17	73.87	.698	.670	-6.425	14.843	11.620	54.308
13	.0251	.081	69.55	73.74	.702	.678	-6.344	14.924	11.762	58.001
14	.0316	.103	71.73	73.18	.724	.713	-5.875	15.392	12.357	73.004
15	.0365	.125	73.68	72.79	.743	.736	-5.458	15.809	12.766	88.929
16	.0454	.147	75.71	72.42	.764	.759	-5.023	16.245	13.160	104.655
17	.0514	.167	77.07	72.24	.778	.770	-4.730	16.538	13.344	118.703
18	.0585	.190	78.56	71.98	.793	.785	-4.411	16.657	13.617	135.090
19	.0655	.212	79.91	71.70	.806	.803	-4.120	17.147	13.913	151.247
20	.0716	.232	81.07	71.51	.818	.814	-3.872	17.396	14.115	165.326
21	.0785	.255	81.84	71.29	.826	.828	-3.707	17.561	14.355	181.251
22	.0855	.277	83.07	71.03	.838	.844	-3.442	17.626	14.626	197.408
23	.0914	.296	83.92	70.87	.847	.854	-3.260	18.008	14.797	211.025
24	.0984	.319	85.08	70.76	.858	.860	-3.010	18.257	14.915	227.182
25	.1055	.342	85.90	70.60	.867	.870	-2.836	18.432	15.081	243.569
26	.1116	.362	86.72	70.47	.875	.878	-2.660	18.608	15.222	257.648
27	.1185	.384	87.67	70.24	.885	.892	-2.456	18.812	15.462	273.573
28	.1253	.406	88.52	70.16	.893	.896	-2.274	18.994	15.532	289.268
29	.1424	.462	90.44	69.81	.912	.918	-1.862	19.406	15.918	328.736
30	.1602	.520	92.34	69.62	.932	.930	-1.454	19.813	16.118	369.819
31	.1773	.575	93.68	69.38	.945	.945	-1.167	20.101	16.376	409.287
32	.1955	.634	94.56	69.18	.954	.956	-0.977	20.290	16.582	451.293
33	.2124	.689	95.61	69.03	.965	.966	-0.752	20.516	16.743	490.299
34	.2307	.748	96.61	68.94	.975	.971	-0.536	20.731	16.839	532.537
35	.2474	.802	97.00	68.97	.979	.969	-0.454	20.814	16.807	571.061
36	.2655	.861	97.59	68.83	.985	.978	-0.328	20.940	16.957	612.857
37	.2825	.916	98.07	68.70	.989	.986	-0.224	21.044	17.089	652.094
38	.3005	.974	98.36	68.64	.992	.990	-0.161	21.106	17.157	693.639
39	.3302	1.071	98.50	68.61	.994	.992	-0.132	21.136	17.191	762.188
40	.3604	1.169	98.77	68.57	.997	.994	-0.073	21.195	17.232	831.891
41	.3905	1.266	99.28	68.54	1.002	.996	0.036	21.304	17.268	901.363
42	.4205	1.364	99.24	68.50	1.001	.998	-0.028	21.295	17.309	970.605
43	.4504	1.460	99.97	68.47	1.000	1.000	-0.032	21.236	17.337	1039.616
44	.4806	1.558	99.13	68.47	1.000	1.000	-0.040	21.272	17.338	1109.319
45	.5107	1.656	99.20	68.47	1.001	1.000	-0.018	21.287	17.338	1178.791
46	.5403	1.752	99.20	68.48	1.001	1.000	-0.019	21.287	17.331	1247.110
47	.5703	1.849	99.16	68.47	1.000	1.000	-0.009	21.277	17.302	1316.351
48	.6004	1.947	99.16	68.48	1.001	0.999	-0.013	21.281	17.323	1385.824
49	.8004	2.595	99.12	68.45	1.000	1.001	-0.000	21.268	17.360	1847.434
50	1.0004	3.244	99.18	68.47	1.001	1.000	-0.013	21.281	17.336	2309.044
51	1.2004	3.892	99.30	68.49	1.002	0.999	-0.041	21.309	17.318	2770.655
52	1.4004	4.541	99.24	68.50	1.001	0.998	-0.027	21.295	17.306	3232.265
53	1.6002	5.188	99.00	68.52	0.999	0.997	-0.025	21.243	17.288	3693.414
54	1.8003	5.837	99.05	68.56	0.999	0.995	-0.014	21.254	17.242	4155.255
55	2.0004	6.486	99.12	68.51	1.000	0.998	-0.002	21.270	17.300	4617.096
56	2.2005	7.135	99.16	68.59	1.000	0.993	-0.010	21.278	17.212	5078.937
57	2.4002	7.782	99.22	68.52	1.001	0.997	-0.023	21.291	17.283	5539.855
58	2.6001	8.431	99.06	68.53	1.000	0.996	-0.011	21.257	17.271	6001.235
59	2.8004	9.080	99.03	68.54	1.000	0.996	-0.018	21.250	17.259	6463.538
60	3.0004	9.728	99.26	68.47	1.001	1.000	-0.031	21.299	17.337	6925.148

Table 49.

JOB KLD66 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79
 RUN NO. 10. POINT 2. GRID NO. 3

BOUNDARY LAYER PROPERTIES

LINEAR INTERPOLATION	STANDARD SUBLAYER FUNCTION FROM TO WALL WALL TO Y+ = 35
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FREE STREAM VELOCITY =	99.606	99.606
FREE STREAM TEMPERATURE =	68.803	
WALL TEMPERATURE =	85.180	
WALL HEAT FLUX =	.07827	
FREE STREAM DENSITY =	.07647	
FREE STREAM KINEMATIC VISCOSITY =	.0001596	
DENSITY OF FLUID AT WALL =	.67417	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001684	
WALL/FREE STREAM DENSITY RATIO =	.96994	
LOCATION REYNOLDS NUMBER (REX) =	624159.74	
INPUT VALUE OF VELOCITY DELTA =	.43000	
INPUT VALUE OF TEMPERATURE DELTA =	.49000	
CALCULATED DELTA =		.32220
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.04005	.04002
MOMENTUM THICKNESS (THETA) =	.02825	.02849
ENERGY-DISSIPATION THICKNESS =	.05086	.05108
ENTHALPY THICKNESS =	.00092	.00093
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.41783	1.40464
SHAPE FACTOR 32 (ENERGY/THETA) =	1.80038	1.79271
MOMENTUM THICKNESS REYNOLDS NUMBER =	1469.41	1482.03
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	2083.38	2081.71
SKIN FRICTION COEFFICIENT =	.004243	
FRICTION VELOCITY =	4.65864	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.05301
CLAUSERS 'DELTA' INTEGRAL =	-.73139	-.83601
CLAUSEPS 'G' INTEGRAL =	4.89388	4.76306
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.03667	.03910
MOMENTUM THICKNESS - CONSTANT DENSITY =	.02843	.02868
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.28983	1.36327

LOCATION -X- 12.00000
 Z = +6 INCHES

Table 50.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 2. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/ FT/SEC	U DEG.F	T U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0049	43.88	78.69	.441	.396	-11.962	9.419	6.875	11.363
2	.0067	52.09	77.97	.523	.440	-10.197	11.182	7.639	15.511
3	.0079	53.96	77.38	.502	.476	-9.798	11.583	8.267	18.277
4	.0089	56.11	76.91	.563	.505	-9.336	12.045	8.761	20.562
5	.0109	60.10	76.22	.603	.547	-8.481	12.900	9.494	25.191
6	.0129	62.32	75.75	.626	.576	-8.004	13.377	9.989	29.801
7	.0149	64.00	75.16	.643	.612	-7.644	13.737	10.617	34.410
8	.0166	65.59	74.99	.658	.622	-7.302	14.079	10.798	38.328
9	.0178	66.01	74.87	.663	.629	-7.213	14.168	10.920	41.094
10	.0199	67.10	74.57	.674	.648	-6.977	14.404	11.246	45.934
11	.0220	67.91	74.36	.682	.661	-6.804	14.577	11.469	50.774
12	.0240	68.72	74.21	.690	.670	-6.629	14.752	11.619	55.384
13	.0256	69.49	74.08	.698	.678	-6.465	14.916	11.759	59.071
14	.0320	71.18	73.54	.715	.711	-6.101	15.280	12.330	73.822
15	.0391	73.29	73.12	.736	.737	-5.648	15.733	12.780	90.186
16	.0460	75.02	72.81	.753	.756	-5.278	16.103	13.374	106.089
17	.0519	76.86	72.56	.772	.771	-4.882	16.499	13.574	119.687
18	.0589	78.04	72.26	.783	.789	-4.630	16.751	13.690	135.820
19	.0659	79.63	72.00	.799	.805	-4.289	17.092	13.961	151.954
20	.0719	80.69	71.90	.810	.811	-4.061	17.320	14.070	165.782
21	.0792	81.81	71.64	.821	.827	-3.819	17.562	14.347	182.607
22	.0861	83.24	71.49	.836	.836	-3.513	17.866	14.509	198.510
23	.0919	84.21	71.30	.845	.848	-3.304	18.077	14.708	211.878
24	.0988	85.02	71.11	.854	.859	-3.131	18.250	14.907	227.780
25	.1058	85.81	70.93	.862	.870	-2.961	18.420	15.101	243.914
26	.1120	86.68	70.76	.870	.881	-2.775	18.606	15.284	258.203
27	.1189	88.18	70.67	.885	.886	-2.454	18.927	15.375	274.106
28	.1261	88.61	70.67	.890	.886	-2.360	19.021	15.373	290.701
29	.1429	90.72	70.25	.911	.912	-1.907	19.474	15.822	329.421
30	.1606	92.46	70.02	.928	.926	-1.530	19.851	16.065	370.215
31	.1779	93.47	69.81	.938	.939	-1.316	20.065	16.288	410.068
32	.1960	94.61	69.61	.950	.951	-1.072	20.309	16.494	451.804
33	.2129	95.61	69.54	.960	.955	-857	20.524	16.575	490.755
34	.2311	96.75	69.32	.971	.968	-613	20.768	16.803	532.702
35	.2480	97.31	69.26	.977	.972	-492	20.889	16.872	571.652
36	.2661	97.85	69.15	.982	.979	-378	21.003	16.982	613.369
37	.2832	98.22	69.15	.986	.979	-297	21.084	16.987	652.780
38	.3009	98.62	69.06	.990	.984	-211	21.170	17.078	693.575
39	.3307	99.22	68.94	.996	.992	-83	21.198	17.209	762.257
40	.3610	99.51	68.92	.999	.993	-21	21.360	17.231	882.091
41	.3909	99.26	68.89	.997	.995	-74	21.307	17.259	901.004
42	.4208	99.40	68.89	.998	.995	-045	21.336	17.260	969.917
43	.4509	99.57	68.85	1.000	.997	-007	21.374	17.298	1039.290
44	.4811	99.63	68.81	1.000	.997	-005	21.366	17.344	1108.894
45	.5110	99.62	68.80	1.000	.999	-002	21.383	17.354	1177.807
46	.5410	99.70	68.80	1.001	1.000	-020	21.401	17.354	1246.950
47	.5709	99.50	68.81	1.000	1.000	-022	21.359	17.349	1315.863
48	.6009	99.85	68.78	1.000	1.001	-026	21.407	17.373	1385.006
49	.8009	99.61	68.78	1.000	1.001	-000	21.381	17.378	1845.960
50	1.0009	99.56	68.74	1.000	1.004	-005	21.376	17.420	2306.914
51	1.2009	99.55	68.69	.999	1.007	-013	21.368	17.472	2767.868
52	1.4009	99.58	68.76	1.000	1.003	-006	21.375	17.402	3228.822
53	1.6006	99.72	68.69	1.001	1.007	-025	21.406	17.475	3689.085
54	1.8010	99.61	68.73	1.000	1.005	-002	21.383	17.431	4150.961
55	2.0010	99.75	68.72	1.001	1.005	-030	21.411	17.443	4611.915
56	2.2009	99.46	68.73	.999	1.005	-031	21.350	17.413	5072.639
57	2.4007	99.56	68.75	1.000	1.004	-009	21.372	17.408	5593.856
58	2.6006	99.35	68.75	.997	1.003	-054	21.327	17.402	6455.732
59	2.8010	99.39	68.76	.998	1.003	-046	21.335	17.402	6916.686
60	3.0010	99.39	68.77	.998	1.002	-046	21.335	17.390	

Table 50.

JOB KLD86 TAPE 3166R~ FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 3. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	SUBLAYER FUNCTION FROM WALL TO Y+ = 35	STANDARD
FREE STREAM VELOCITY =	99.576	99.576	
FREE STREAM TEMPERATURE =	69.320		
WALL TEMPERATURE =	85.670		
WALL HEAT FLUX =	.07945		
FREE STREAM DENSITY =	.07640		
FREE STREAM KINEMATIC VISCOSITY =	.0001599		
DENSITY OF FLUID AT WALL =	.07411		
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001687		
WALL/FREE STREAM DENSITY RATIO =	.97002		
LOCATION REYNOLDS NUMBER (REX) =	622893.96		
INPUT VALUE OF VELOCITY DELTA =	.43000		
INPUT VALUE OF TEMPERATURE DELTA =	.46000		
CALCULATED DELTA =			.30385
DELTA 99.5% INPUT =	.00000		
DISPLACEMENT THICKNESS (DELSTAR) =	.03919		.03913
MOMENTUM THICKNESS (THETA) =	.02744		.02785
ENERGY-DISSIPATION THICKNESS =	.04954		.04994
ENTHALPY THICKNESS =	.00086		.00086
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.42855		1.40498
SHAPE FACTOR 32 (ENERGY/THETA) =	1.80550		1.79303
MOMENTUM THICKNESS REYNOLDS NUMBER =	1424.16		1445.81
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	2034.49		2031.34
SKIN FRICTION COEFFICIENT =	.004227		
FRICTION VELOCITY =	4.64792		
LAW OF THE WALL CONSTANT (K) =	.41000		
LAW OF THE WALL CONSTANT (C) =	5.00000		.09308
WAKE STRENGTH =			
CLAUSERS 'DELTA' INTEGRAL =	-.68576		-.81993
CLAUSERS 'G' INTEGRAL =	4.92636		4.69910
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.03517		.03827
MOMENTUM THICKNESS - CONSTANT DENSITY =	.02761		.02803
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.27415		1.36521
LOCATION -X- =	12.00000		
Z = -6 INCHES			

Table 51.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 3. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/ FT	U FT/SEC	T DEG.F	U/UE	THETA	U-UE	UTAU	U(+)	T(+)	Y(+)
1	.0063	.021	.50.99	78.12	.512	.462	-10.454	10.969	7.853	14.533	
2	.0073	.024	.52.86	77.66	.531	.490	-10.050	11.374	8.336	16.828	
3	.0063	.027	.55.72	77.20	.560	.518	-9.437	11.987	8.818	19.124	
4	.0093	.031	.58.25	76.82	.585	.541	-8.892	12.532	9.206	21.420	
5	.0103	.034	.59.95	76.54	.602	.558	-8.525	12.899	9.500	23.716	
6	.0121	.040	.62.58	76.16	.628	.582	-7.961	13.463	9.894	27.848	
7	.0137	.045	.63.76	75.92	.640	.596	-7.705	13.719	10.145	31.522	
8	.0143	.047	.64.20	75.83	.645	.602	-7.610	13.813	10.237	32.899	
9	.0163	.054	.65.59	75.45	.659	.625	-7.311	14.113	10.632	37.491	
10	.0183	.060	.66.55	75.15	.668	.643	-7.106	14.317	10.945	42.082	
11	.0206	.068	.67.70	75.03	.680	.651	-6.858	14.566	11.072	47.363	
12	.0222	.073	.68.48	74.89	.688	.660	-6.690	14.734	11.221	51.036	
13	.0236	.078	.68.94	74.73	.692	.669	-6.591	14.833	11.380	54.250	
14	.0256	.084	.69.72	74.56	.700	.679	-6.423	15.001	11.556	58.842	
15	.0276	.091	.70.23	74.43	.705	.688	-6.315	15.109	11.699	63.433	
16	.0296	.098	.70.80	74.31	.711	.695	-6.191	15.233	11.822	68.025	
17	.0312	.103	.71.41	74.20	.717	.702	-6.060	15.364	11.936	71.698	
18	.0373	.123	.73.16	73.78	.735	.727	-5.684	15.740	12.368	85.703	
19	.0443	.146	.74.84	73.36	.752	.753	-5.322	16.102	12.813	101.774	
20	.0513	.169	.76.95	73.06	.773	.772	-4.868	16.556	13.125	117.844	
21	.0573	.189	.78.13	72.81	.785	.787	-4.614	16.810	13.383	131.619	
22	.0647	.213	.79.56	72.55	.799	.802	-4.306	17.117	13.647	148.608	
23	.0715	.235	.80.96	72.31	.613	.817	-4.006	17.418	13.900	164.220	
24	.0775	.255	.82.22	72.16	.826	.827	-3.735	17.689	14.061	177.995	
25	.0843	.278	.83.33	71.96	.837	.839	-3.496	17.928	14.266	193.606	
26	.0913	.301	.84.19	71.72	.845	.853	-3.311	18.112	14.518	209.677	
27	.0976	.321	.85.13	71.56	.855	.863	-3.109	18.315	14.685	224.141	
28	.1046	.344	.86.14	71.38	.865	.874	-2.891	18.533	14.870	240.211	
29	.1116	.367	.87.06	71.18	.874	.886	-2.692	18.732	15.072	256.282	
30	.1175	.387	.88.10	71.00	.885	.897	-2.469	18.955	15.265	269.827	
31	.1247	.410	.88.81	70.94	.892	.901	-2.316	19.108	15.327	286.357	
32	.1316	.433	.89.64	70.86	.900	.906	-2.138	19.286	15.412	302.198	
33	.1485	.489	.91.36	70.61	.918	.921	-1.767	19.657	15.667	340.998	
34	.1662	.547	.92.89	70.32	.933	.939	-1.439	19.985	15.977	381.634	
35	.1835	.604	.94.49	70.10	.949	.952	-1.095	20.329	16.203	421.351	
36	.2016	.664	.95.55	69.94	.960	.962	-866	20.558	16.362	462.906	
37	.2185	.719	.96.44	69.78	.968	.972	-675	20.748	16.530	501.705	
38	.2366	.779	.97.21	69.74	.976	.974	-510	20.914	16.570	543.259	
39	.2533	.834	.97.68	69.69	.981	.978	-409	21.015	16.630	581.599	
40	.2716	.894	.98.05	69.56	.985	.985	-328	21.096	16.758	623.613	
41	.2883	.949	.98.52	69.56	.989	.985	-227	21.196	16.764	661.953	
42	.3065	1.009	.98.81	69.50	.992	.989	-165	21.259	16.822	703.737	
43	.3362	1.107	.99.12	69.42	.995	.994	-988	21.326	16.912	71.923	
44	.3668	1.207	.99.18	69.38	.996	.996	-885	21.339	16.952	842.175	
45	.3966	1.305	.99.37	69.40	.998	.995	-045	21.378	16.929	910.590	
46	.4266	1.404	.99.44	69.35	.999	.998	-029	21.395	16.985	979.466	
47	.4567	1.503	.99.50	69.35	.999	.998	-016	21.408	16.982	1048.569	
48	.4863	1.601	.99.59	69.35	1.000	.998	-002	21.426	16.980	1116.525	
49	.5165	1.700	.99.64	69.31	1.001	1.001	-014	21.438	17.021	1185.859	
50	.5466	1.799	.99.47	69.30	1.000	1.001	-023	21.400	17.036	1254.963	
51	.5766	1.898	.99.59	69.32	1.000	1.000	-002	21.426	17.013	1323.837	
52	.6063	1.995	.99.50	69.28	1.000	1.002	-016	21.408	17.050	1392.023	
53	.8063	2.654	.99.47	69.32	1.000	1.000	-024	21.400	17.008	1851.187	
54	1.0063	3.312	.99.44	69.33	1.000	1.000	-029	21.395	16.997	2310.350	
55	1.2063	3.970	.99.65	69.35	1.001	1.000	-016	21.400	16.985	2769.514	
56	1.4063	4.628	.99.02	69.36	1.000	1.000	-120	21.304	16.975	3228.677	
57	1.6061	5.286	.99.09	69.32	1.000	1.000	-104	21.320	17.014	3687.382	
58	1.8063	5.945	.99.32	69.36	1.000	1.000	-056	21.368	16.975	4147.004	
59	2.0066	6.604	.99.30	69.32	1.000	1.000	-060	21.363	17.009	4606.857	
60	2.2063	7.261	.99.53	69.34	1.000	1.000	-009	21.410	16.991	5065.331	
61	2.4062	7.919	.99.46	69.36	1.000	1.000	-024	21.400	16.972	5524.265	
62	2.6061	8.577	.99.24	69.39	1.000	1.000	-073	21.351	16.939	5983.199	
63	2.8063	9.236	.99.32	69.37	1.000	1.000	-055	21.369	16.963	6442.822	
64	3.0063	9.894	.99.35	69.35	1.000	1.000	-049	21.375	16.980	6901.986	

Table 51.

JOB KLD70 TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 7. GRID NO. 3

BOUNDARY LAYER PROPERTIES

LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y+ = 35$
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FREE STREAM VELOCITY	=	99.379	99.379
FREE STREAM TEMPERATURE	=	71.677	
WALL TEMPERATURE	=	91.600	
WALL HEAT FLUX	=	.07783	
FREE STREAM DENSITY	=	.07569	
FREE STREAM KINEMATIC VISCOSITY	=	.0001619	
DENSITY OF FLUID AT WALL	=	.07295	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.0001728	
WALL/FREE STREAM DENSITY RATIO	=	.96386	
LOCATION REYNOLDS NUMBER (REX)	=	1447419.62	
INPUT VALUE OF VELOCITY DELTA	=	1.30000	
INPUT VALUE OF TEMPERATURE DELTA	=	1.30000	
CALCULATED DELTA			.67210
DISPLACEMENT THICKNESS (DELSTAR)	=	.00000	
MOMENTUM THICKNESS (THETA)	=	.08106	.08093
ENERGY-DISSIPATION THICKNESS	=	.05936	.05979
ENTHALPY THICKNESS	=	.10798	.10839
SHAPE FACTOR 12 (DELSTAR/R/THETA)	=	.00235	.00236
SHAPE FACTOR 32 (ENERGY/THETA)	=	1.36548	1.35360
MOMENTUM THICKNESS REYNOLDS NUMBER	=	1.81897	1.81278
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	3036.21	3058.03
SKIN FRICTION COEFFICIENT	=	4145.89	4139.36
FRICTION VELOCITY	=	.003559	
LAW OF THE WALL CONSTANT (K)	=	4.27000	
LAW OF THE WALL CONSTANT (C)	=	.41000	
WAKE STRENGTH	=	5.00000	
CLAUSERS 'DELTA' INTEGRAL	=	-1.66128	-1.82861
CLAUSERS 'G' INTEGRAL	=	10.25438	9.93869
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.07504	.07857
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.05978	.06022
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.25538	1.30468

LOCATION -X- 28.30000

Z = CENTERLINE

Table 52.

JOB KLD7C TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 7. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELT A	U/ FT/SEC	T/ DEG.F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.0073	.011	46.77	83.53	.471	.405	-12.320	10.954	7.747	15.093
2	.0085	.013	49.46	82.70	.498	.447	-11.691	11.583	8.547	17.564
3	.0093	.014	51.81	82.31	.521	.466	-11.141	12.133	8.923	19.211
4	.0103	.015	53.46	81.91	.534	.487	-10.749	12.525	9.312	21.270
5	.0117	.017	55.09	81.30	.554	.517	-10.372	12.901	9.889	24.153
6	.0132	.020	57.29	81.00	.576	.532	-9.857	13.417	10.178	27.441
7	.0147	.022	58.19	80.57	.586	.554	-9.647	13.627	10.594	30.330
8	.0157	.023	58.80	80.30	.592	.567	-9.503	13.771	10.850	32.389
9	.0175	.026	60.06	80.08	.604	.578	-9.208	14.066	11.065	36.095
10	.0194	.029	60.99	79.75	.614	.595	-8.990	14.284	11.385	40.008
11	.0215	.032	61.79	79.58	.622	.603	-8.803	14.471	11.548	44.332
12	.0231	.034	62.38	79.36	.628	.614	-8.665	14.609	11.758	47.626
13	.0247	.037	62.86	79.03	.633	.631	-8.553	14.721	12.078	50.921
14	.0267	.040	63.62	79.03	.640	.631	-8.375	14.899	12.071	55.039
15	.0286	.043	64.41	78.81	.648	.642	-8.190	15.084	12.282	58.951
16	.0307	.046	64.84	78.63	.652	.651	-8.088	15.186	12.454	63.275
17	.0322	.048	65.17	78.53	.656	.656	-8.012	15.262	12.551	66.364
18	.0367	.058	66.98	78.07	.674	.679	-7.587	15.687	12.997	79.748
19	.0455	.068	68.59	77.75	.690	.695	-7.210	16.064	13.308	93.749
20	.0524	.078	69.91	77.46	.703	.710	-6.902	16.372	13.581	107.957
21	.0565	.087	71.14	77.36	.716	.715	-6.614	16.660	13.677	120.517
22	.0657	.096	72.19	77.10	.726	.728	-6.369	16.905	13.926	135.342
23	.0727	.108	73.25	76.74	.737	.746	-6.119	17.155	14.272	149.756
24	.0787	.117	74.45	76.61	.749	.752	-5.839	17.435	14.397	162.110
25	.0855	.127	75.28	76.50	.758	.758	-5.643	17.631	14.508	176.112
26	.0925	.138	76.26	76.40	.767	.763	-5.415	17.859	14.598	190.525
27	.0963	.146	76.95	76.15	.774	.776	-5.253	18.021	14.845	202.468
28	.1055	.157	77.70	75.91	.782	.788	-5.078	18.196	15.072	217.293
29	.1124	.167	78.53	75.78	.790	.794	-4.883	18.391	15.195	231.501
30	.1186	.177	79.37	75.76	.799	.795	-4.687	18.587	15.214	244.267
31	.1254	.187	79.94	75.72	.804	.797	-4.553	18.721	15.258	258.269
32	.1325	.197	80.82	75.48	.813	.809	-4.347	18.927	15.487	272.888
33	.1496	.223	82.22	74.99	.827	.834	-4.018	19.256	15.958	308.098
34	.1671	.249	83.77	74.97	.843	.835	-3.655	19.619	15.973	344.132
35	.1844	.274	84.89	74.72	.854	.847	-3.392	19.881	16.209	379.753
36	.2026	.301	86.32	74.37	.869	.865	-3.059	20.215	16.554	417.228
37	.2193	.326	87.36	74.25	.879	.871	-2.815	20.459	16.662	451.615
38	.2374	.353	88.22	74.15	.888	.876	-2.614	20.659	16.764	488.884
39	.2543	.378	89.46	73.96	.890	.885	-2.317	20.957	16.944	523.682
40	.2727	.406	90.09	73.74	.907	.896	-2.175	21.098	17.151	561.569
41	.2895	.431	90.36	73.54	.909	.906	-2.112	21.162	17.348	596.161
42	.3074	.457	91.03	73.45	.916	.911	-1.954	21.319	17.434	633.018
43	.3371	.502	92.29	73.11	.929	.928	-1.660	21.614	17.759	694.173
44	.3675	.547	93.40	72.96	.940	.936	-1.401	21.873	17.907	756.768
45	.3977	.592	94.24	72.75	.948	.946	-1.202	22.071	18.102	818.952
46	.4277	.636	94.96	72.57	.956	.955	-1.035	22.239	18.283	880.724
47	.4573	.680	95.35	72.52	.959	.958	-943	22.331	18.326	941.672
48	.4873	.725	95.84	72.46	.964	.960	-829	22.445	18.381	1003.444
49	.5177	.770	96.38	72.30	.970	.969	-702	22.572	18.543	1066.040
50	.5475	.815	96.83	72.23	.974	.972	-604	22.670	18.606	1127.400
51	.5775	.859	97.20	72.08	.978	.980	-511	22.763	18.747	1189.172
52	.6075	.904	97.49	72.05	.983	.981	-395	22.879	18.779	1250.944
53	.8073	1.201	98.92	71.84	.995	.992	-107	23.167	18.980	1662.345
54	1.0077	1.899	99.24	71.75	.999	.996	-0.32	23.242	19.070	2074.982
55	1.2076	1.797	99.42	71.70	1.000	.999	-0.08	23.282	19.112	2486.589
56	1.4074	2.094	99.37	71.69	1.000	.999	-0.03	23.271	19.128	2897.990
57	1.6071	2.391	99.35	71.70	1.000	.999	-0.07	23.267	19.113	3309.186
58	1.8076	2.696	99.42	71.64	1.000	1.002	-0.10	23.284	19.172	3722.028
59	2.0079	2.988	99.36	71.64	1.000	1.002	-0.05	23.269	19.171	4134.459

Table 52.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 4. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY	99.588	99.588
FREE STREAM TEMPERATURE	69.822	
WALL TEMPERATURE	89.070	
WALL HEAT FLUX	.07719	
FREE STREAM DENSITY	.07633	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001601	
WALL/FREE STREAM DENSITY RATIO	.07365	
LOCATION REYNOLDS NUMBER (REX)	.0001706	
INPUT VALUE OF VELOCITY DELTA	.96492	
INPUT VALUE OF TEMPERATURE DELTA	1461518.06	
CALCULATED DELTA	1.10000	
DISPLACEMENT THICKNESS (DELSTAR)	1.30000	
MOMENTUM THICKNESS (THETA)	.67762	
ENERGY-DISSIPATION THICKNESS	.00000	
SHAPE FACTOR 12 (DELSTAR/THETA)	.08466	
SHAPE FACTOR 32 (ENERGY/THETA)	.06199	
MOMENTUM THICKNESS REYNOLDS NUMBER	.06223	
DISPLACEMENT THICKNESS REYNOLDS NUMBER	.11212	
SKIN FRICTION COEFFICIENT	.11234	
FRICITION VELOCITY	.00215	
LAW OF THE WALL CONSTANT (K)	.0036553	
LAW OF THE WALL CONSTANT (C)	1.80855	
WAKE STRENGTH	1.35935	
CLAUSERS 'DELTA' INTEGRAL	1.80509	
DISPLACEMENT THICKNESS - CONSTANT DENSITY	3212.99	
MOMENTUM THICKNESS - CONSTANT DENSITY	3225.35	
SHAPE FACTOR 12 - CONSTANT DENSITY	4387.44	
	4384.37	

LOCATION -X- 28.20000

Z = +6 INCHES

Table 53.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 4. GRID NO. 3

REDUCED PROFILE DATA

N	Y/ INCHES	Y/ FT/SEC	U DEG.F	T U/UE	THETA UTAU	U-UE U(+)	T(+)	Y(+)
1	.0054	.008	37.48	82.07	.376	.364 -14.708	8.874	6.768 11.203
2	.0071	.011	45.22	81.13	.454	.413 -12.874	10.709	7.682 14.710
3	.0083	.012	48.06	80.52	.483	.446 -12.202	11.381	8.265 17.186
4	.0094	.014	50.76	80.04	.510	.469 -11.562	12.021	8.735 19.455
5	.0117	.017	54.38	79.06	.546	.520 -10.706	12.876	9.684 24.201
6	.0137	.020	56.62	78.58	.569	.546 -9.881	13.408	10.145 28.327
7	.0153	.023	57.86	78.47	.581	.553 -10.174	13.702	10.251 31.628
8	.0172	.025	59.06	77.95	.593	.578 -9.596	13.986	10.756 35.548
9	.0183	.027	59.74	77.79	.600	.586 -9.435	14.148	10.906 37.817
10	.0203	.030	60.67	77.57	.609	.598 -9.217	14.366	11.124 41.944
11	.0223	.033	61.37	77.21	.616	.616 -9.051	14.531	11.467 46.070
12	.0243	.036	62.10	76.64	.624	.630 -8.876	14.706	11.727 50.196
13	.0261	.039	62.68	76.85	.629	.635 -8.740	14.843	11.816 53.910
14	.0324	.046	64.40	76.52	.647	.652 -8.333	15.250	12.135 66.908
15	.0395	.058	66.18	76.12	.665	.673 -7.910	15.673	12.523 81.556
16	.0465	.066	67.90	75.77	.682	.691 -7.503	16.080	12.858 95.585
17	.0524	.077	69.03	75.31	.693	.715 -7.237	16.345	13.304 106.170
18	.0593	.088	70.10	75.20	.704	.721 -6.982	16.600	13.414 122.406
19	.0663	.096	71.51	74.98	.718	.732 -6.649	16.934	13.624 136.848
20	.0724	.107	72.46	74.71	.728	.746 -6.420	17.163	13.886 149.433
21	.0793	.117	73.39	74.59	.737	.752 -6.205	17.378	14.001 163.669
22	.0864	.126	74.12	74.28	.744	.768 -6.031	17.552	14.298 176.317
23	.0923	.136	74.93	74.37	.752	.764 -5.838	17.744	14.220 190.489
24	.0997	.147	76.14	74.04	.765	.781 -5.541	18.042	14.532 205.757
25	.1063	.157	76.94	73.95	.773	.785 -5.364	18.218	14.617 219.373
26	.1123	.166	77.46	73.82	.778	.792 -5.235	18.347	14.750 231.752
27	.1194	.176	78.08	73.64	.784	.802 -5.092	18.490	14.925 246.400
28	.1263	.186	78.83	73.60	.792	.804 -4.916	18.667	14.961 260.636
29	.1438	.212	80.47	73.19	.808	.825 -4.526	19.056	15.359 296.741
30	.1611	.238	81.59	72.86	.819	.842 -4.263	19.320	15.673 332.433
31	.1768	.264	83.47	72.73	.838	.849 -3.817	19.766	15.801 368.951
32	.1964	.290	84.96	72.68	.853	.851 -3.464	20.119	15.849 405.262
33	.2137	.315	85.97	72.24	.863	.874 -3.225	20.358	16.271 440.954
34	.2314	.342	87.04	72.02	.874	.886 -2.970	20.612	16.487 477.472
35	.2484	.367	87.96	71.93	.883	.891 -2.754	20.829	16.579 512.545
36	.2663	.393	88.82	71.61	.892	.907 -2.550	21.032	16.885 549.475
37	.2634	.418	89.97	71.53	.903	.911 -2.278	21.304	16.961 584.755
38	.3013	.445	90.57	71.41	.909	.918 -2.135	21.448	17.080 621.685
39	.3311	.489	91.99	71.26	.924	.926 -1.799	21.783	17.227 683.167
40	.3613	.533	92.94	71.01	.933	.938 -1.575	22.008	17.463 745.473
41	.3913	.576	94.06	70.80	.945	.949 -1.308	22.274	17.668 807.367
42	.4219	.623	94.90	70.75	.953	.952 -1.111	22.471	17.719 870.499
43	.4513	.666	95.27	70.55	.957	.962 -1.024	22.559	17.909 931.156
44	.4814	.710	95.78	70.48	.962	.966 -902	22.680	17.976 993.256
45	.5117	.755	96.32	70.34	.967	.973 -773	22.809	18.117 1055.769
46	.5416	.799	96.83	70.31	.972	.975 -654	22.929	18.143 1117.457
47	.5716	.844	96.95	70.21	.974	.980 -624	22.958	18.235 1179.351
48	.6013	.887	97.89	70.17	.963	.982 -401	23.182	18.278 1240.626
49	.8014	1.183	99.12	69.95	.995	.993 -112	23.471	18.489 1653.460
50	1.0014	1.478	99.51	69.87	.999	.998 -020	23.563	18.570 2066.087
51	1.2014	1.773	99.63	69.81	1.000	1.001 -010	23.592	18.624 2478.715
52	1.4014	2.068	99.48	69.82	1.000	1.000 -025	23.558	18.613 2891.342
53	1.6012	2.363	99.65	69.83	1.001	1.000 -015	23.598	18.602 3503.551
54	1.8014	2.658	99.66	69.81	1.001	1.001 -018	23.601	18.624 3716.597
55	2.0013	2.953	99.61	69.78	1.000	1.002 -004	23.587	18.651 4129.018
56	2.2014	3.249	99.65	69.81	1.001	1.001 -014	23.597	18.624 4541.852
57	2.4012	3.544	99.66	69.76	1.001	1.003 -021	23.604	18.673 4954.066
58	2.6012	3.839	99.53	69.79	1.000	1.001 -013	23.569	18.640 5366.694
59	2.8014	4.134	98.98	69.83	1.000	1.000 -144	23.438	18.602 5779.734
60	3.0014	4.429	99.11	69.82	1.000	1.000 -114	23.469	18.619 6192.361

Table 53.

JOB KLD70 TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 11. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y^+=35$
FREE STREAM VELOCITY =	99.159	99.159
FREE STREAM TEMPERATURE =	70.710	
WALL TEMPERATURE =	91.960	
WALL HEAT FLUX =	.07763	
FREE STREAM DENSITY =	.07597	
FREE STREAM KINEMATIC VISCOSITY =	.0001611	
DENSITY OF FLUID AT WALL =	.07305	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001727	
WALL/FREE STREAM DENSITY RATIO =	.96148	
LOCATION REYNOLDS NUMBER (REX) =	1862132.25	
INPUT VALUE OF VELOCITY DELTA =	1.30000	
INPUT VALUE OF TEMPERATURE DELTA =	1.60000	
CALCULATED DELTA =		.79721
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.09812	.09842
MOMENTUM THICKNESS (THETA) =	.07265	.07274
ENERGY-DISSIPATION THICKNESS =	.13171	.13169
ENTHALPY THICKNESS =	.00293	.00293
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.35067	1.35297
SHAPE FACTOR 32 (ENERGY/THETA) =	1.81292	1.81040
MOMENTUM THICKNESS REYNOLDS NUMBER =	3726.75	3731.45
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	5033.62	5048.55
SKIN FRICTION COEFFICIENT =	.003357	
FRICITION VELOCITY =	4.14280	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.19475
CLAUSERS 'DELTA' INTEGRAL =	-2.17566	-2.28635
CLAUSERS 'G' INTEGRAL =	12.63266	12.74644
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.09306	.09552
MOMENTUM THICKNESS - CONSTANT DENSITY =	.07318	.07327
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.27175	1.30365
LOCATION -X- =	36.30000	
Z = CENTERLINE		

Table 54.

JOB KLD70 TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 11. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/ FT/SEC	U DEG.F	T U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0043	.005	36.62	85.76	.369	.292	-15.096	8.839	5.805
2	.0056	.007	38.78	84.60	.391	.346	-14.574	9.361	6.887
3	.0063	.008	41.47	83.98	.418	.375	-13.926	10.009	7.464
4	.0075	.009	45.54	83.17	.459	.414	-12.942	10.993	8.227
5	.0085	.011	48.73	82.60	.487	.440	-12.268	11.667	8.755
6	.0101	.013	52.01	81.74	.524	.481	-11.382	12.553	9.557
7	.0114	.014	53.59	81.32	.540	.501	-11.001	12.935	9.951
8	.0128	.016	55.07	80.93	.555	.519	-10.643	13.292	10.322
9	.0147	.018	56.46	80.41	.569	.544	-10.306	13.629	10.809
10	.0163	.020	57.26	80.06	.577	.559	-10.113	13.822	11.119
11	.0183	.023	58.41	79.73	.589	.575	-9.835	14.100	11.439
12	.0201	.025	59.27	79.45	.598	.589	-9.629	14.306	11.707
13	.0215	.027	59.65	79.18	.602	.602	-9.538	14.398	11.960
14	.0237	.030	60.61	79.01	.611	.609	-9.305	14.630	12.115
15	.0253	.032	60.97	78.88	.615	.616	-9.219	14.716	12.237
16	.0277	.035	61.93	78.56	.625	.631	-8.966	14.950	12.539
17	.0292	.037	62.19	78.57	.627	.630	-8.925	15.010	12.529
18	.0356	.045	63.96	78.05	.645	.655	-8.497	15.439	13.014
19	.0424	.053	65.72	77.53	.663	.679	-8.071	15.865	13.498
20	.0494	.062	66.96	77.23	.675	.693	-7.768	16.167	13.784
21	.0555	.070	68.29	76.97	.689	.706	-7.451	16.484	14.029
22	.0625	.078	69.39	76.78	.700	.714	-7.186	16.750	14.201
23	.0693	.087	70.26	76.51	.709	.727	-6.976	16.959	14.453
24	.0755	.095	71.46	76.20	.721	.742	-6.680	17.255	14.747
25	.0824	.103	72.36	75.98	.730	.752	-6.470	17.466	15.013
26	.0893	.112	73.11	75.90	.737	.756	-6.289	17.647	15.025
27	.0953	.120	73.80	75.71	.744	.765	-6.122	17.813	15.203
28	.1025	.129	74.80	75.51	.754	.774	-5.879	18.056	15.393
29	.1097	.138	75.45	75.26	.761	.786	-5.722	18.213	15.624
30	.1155	.145	76.06	75.21	.767	.788	-5.575	18.361	15.673
31	.1224	.154	76.83	75.20	.775	.789	-5.391	18.544	15.679
32	.1293	.162	77.66	75.11	.783	.793	-5.189	18.746	15.763
33	.1466	.184	79.07	74.74	.797	.810	-4.848	19.087	16.111
34	.1642	.206	80.20	74.34	.809	.829	-4.576	19.359	16.489
35	.1817	.228	81.66	74.23	.824	.834	-4.224	19.712	16.589
36	.1995	.250	82.85	74.04	.836	.843	-3.936	19.999	16.766
37	.2166	.272	83.98	73.80	.847	.855	-3.664	20.271	16.989
38	.2343	.294	84.95	73.74	.857	.858	-3.430	20.505	17.049
39	.2517	.316	86.19	73.46	.869	.871	-3.131	20.805	17.308
40	.2696	.336	88.61	73.23	.873	.881	-3.028	20.907	17.523
41	.2869	.360	87.71	73.10	.885	.887	-2.763	21.172	17.641
42	.3045	.382	88.37	72.86	.891	.899	-2.604	21.331	17.866
43	.3394	.426	89.95	72.61	.907	.911	-2.224	21.712	18.102
44	.3743	.470	91.13	72.47	.919	.917	-1.938	21.998	18.238
45	.4095	.514	92.14	72.11	.929	.934	-1.694	22.241	18.572
46	.4445	.558	93.05	71.98	.938	.940	-1.475	22.460	18.693
47	.4795	.602	94.01	71.75	.948	.951	-1.242	22.693	18.911
48	.5144	.645	94.51	71.61	.953	.958	-1.123	22.813	19.040
49	.5494	.689	95.33	71.61	.961	.958	-0.925	23.010	19.036
50	.5845	.733	95.82	71.47	.966	.964	-0.806	23.129	19.173
51	.6195	.777	96.44	71.37	.973	.969	-0.657	23.279	19.266
52	.6545	.821	96.73	71.29	.975	.973	-0.586	23.349	19.339
53	.6894	.865	97.22	71.18	.980	.978	-0.469	23.466	19.437
54	.7243	.909	97.46	71.21	.983	.977	-0.409	23.526	19.417
55	.7593	.952	97.82	71.07	.987	.983	-0.323	23.612	19.542
56	.7943	.996	97.92	71.01	.988	.986	-0.298	23.637	19.605
57	.8293	1.040	97.96	70.99	.988	.987	-0.286	23.646	19.620
58	.8643	1.084	98.29	70.94	.991	.989	-0.210	23.725	19.667
59	.8995	1.128	98.42	70.92	.993	.990	-0.179	23.756	19.682
60	.9347	1.173	98.59	70.95	.994	.989	-0.138	23.797	19.657
61	.9694	1.216	98.65	70.92	.995	.990	-0.122	23.813	19.688
62	1.0046	1.260	98.65	70.91	.995	.991	-0.122	23.813	19.698
63	1.2893	1.617	99.00	70.79	.998	.996	-0.059	23.897	19.803
64	1.5753	1.976	99.16	70.75	1.000	.998	-0.061	23.937	19.839
65	1.8615	2.335	99.15	70.73	1.000	.999	-0.003	23.933	19.865
66	2.1471	2.693	99.16	70.73	1.000	.999	-0.001	23.937	19.865
67	2.4325	3.051	99.05	70.68	.999	1.002	-0.027	23.908	19.912
68	2.7184	3.410	99.08	70.70	.999	1.000	-0.020	23.915	19.886
69	3.0045	3.769	99.01	70.69	.998	1.001	-0.037	23.899	19.896

Table 54.

JOB KLD70 TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 12. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION	SUBLAYER FUNCTION FROM TO WALL	STANDARD FUNCTION FROM WALL TO Y+ = 35
FREE STREAM VELOCITY	= 99.283		99.283
FREE STREAM TEMPERATURE	= 71.407		
WALL TEMPERATURE	= 92.650		
WALL HEAT FLUX	= .07772		
FREE STREAM DENSITY	= .07587		
FREE STREAM KINEMATIC VISCOSITY	= .0001615		
DENSITY OF FLUID AT WALL	= .07296		
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001731		
WALL/FREE STREAM DENSITY RATIO	= .96154		
LOCATION REYNOLDS NUMBER (REX)	= 2274682.56		
INPUT VALUE OF VELOCITY DELTA	= 1.30000		
INPUT VALUE OF TEMPERATURE DELTA	= 1.60000		
CALCULATED DELTA			.94764
DELTA 99.5% INPUT	= .00000		
DISPLACEMENT THICKNESS (DELSTAR)	= .11196		.11205
MOMENTUM THICKNESS (THETA)	= .08313		.08331
ENERGY-DISSIPATION THICKNESS	= .15090		.15102
ENTHALPY THICKNESS	= .00344		.00344
SHAPE FACTOR 12 (DELSTAR/THETA)	= 1.34687		1.34491
SHAPE FACTOR 32 (ENERGY/THETA)	= 1.81532		1.81272
MOMENTUM THICKNESS REYNOLDS NUMBER	= 4259.70		4269.14
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 5737.26		5741.59
SKIN FRICTION COEFFICIENT	= .003299		
FRICTION VELOCITY	= 4.11184		
LAW OF THE WALL CONSTANT (K)	= .41000		
LAW OF THE WALL CONSTANT (C)	= 5.00000		
WAKE STRENGTH			.15631
CLAUSERS 'DELTA' INTEGRAL	= -2.49264		-2.62331
CLAUSERS 'G' INTEGRAL	= 14.47585		14.41140
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .10590		.10865
MOMENTUM THICKNESS - CONSTANT DENSITY	= .08373		.08393
SHAPE FACTOR 12 - CONSTANT DENSITY	= 1.26470		1.29453
LOCATION -X-	44.38998		
Z = CENTERLINE			

Table 55.

JOB KLD7D TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 12. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/ DEG	U FT/SEC	T DEG.F	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0053	.006	37.87	85.66	.381	.329	-14.936	9.210	6.477	10.554
2	.0065	.007	41.69	84.49	.414	.384	-14.592	9.993	7.558	12.930
3	.0073	.008	43.95	83.89	.443	.412	-13.458	10.688	8.112	14.514
4	.0085	.009	47.21	83.32	.476	.459	-12.663	11.483	8.641	16.890
5	.0095	.010	49.26	83.00	.496	.454	-12.165	11.981	8.941	18.870
6	.0111	.012	51.81	82.32	.522	.486	-11.545	12.601	9.568	22.038
7	.0127	.013	53.66	81.77	.540	.512	-11.096	13.050	10.077	25.206
8	.0137	.014	54.61	81.52	.550	.524	-10.864	13.281	10.308	27.186
9	.0155	.016	56.10	81.18	.565	.540	-10.502	13.644	10.628	30.750
10	.0178	.019	57.65	80.64	.581	.565	-10.124	14.021	11.121	35.304
11	.0194	.021	58.20	80.61	.586	.567	-9.991	14.155	11.157	38.473
12	.0212	.022	58.97	80.33	.594	.580	-9.804	14.342	11.409	42.037
13	.0226	.024	59.52	80.26	.599	.583	-9.671	14.475	11.473	44.809
14	.0245	.026	60.35	80.00	.608	.596	-9.469	14.677	11.722	48.571
15	.0263	.028	60.77	79.69	.612	.610	-9.367	14.779	12.003	52.135
16	.0283	.030	61.48	79.74	.619	.608	-9.195	14.951	11.959	56.095
17	.0301	.032	61.99	79.66	.624	.612	-9.070	15.075	12.037	59.659
18	.0363	.036	63.45	79.09	.639	.638	-8.713	15.432	12.558	71.936
19	.0437	.046	65.25	78.60	.657	.662	-8.278	15.868	13.018	86.568
20	.0514	.053	66.70	78.25	.672	.678	-7.924	16.221	13.338	99.654
21	.0567	.060	67.89	77.94	.684	.693	-7.635	16.511	13.630	112.329
22	.0637	.067	69.05	77.82	.696	.698	-7.352	16.794	13.739	126.169
23	.0705	.074	69.97	77.60	.705	.708	-7.128	17.017	13.939	139.654
24	.0763	.081	70.96	77.47	.715	.715	-6.887	17.258	14.061	151.138
25	.0835	.088	71.84	77.27	.724	.724	-6.675	17.471	14.251	165.394
26	.0904	.095	72.54	76.95	.731	.739	-6.503	17.642	14.545	179.057
27	.0964	.102	73.26	76.86	.738	.743	-6.328	17.817	14.627	190.937
28	.1035	.109	74.13	76.65	.747	.753	-6.117	18.029	14.817	204.996
29	.1105	.117	74.49	76.54	.750	.759	-6.030	18.116	14.926	218.856
30	.1165	.123	75.49	76.46	.760	.762	-5.787	18.359	14.997	230.736
31	.1233	.130	75.86	76.15	.764	.777	-5.696	18.449	15.284	244.201
32	.1304	.136	76.56	75.97	.771	.785	-5.527	18.619	15.448	258.259
33	.1476	.156	77.86	75.77	.784	.795	-5.210	18.935	15.638	292.316
34	.1651	.174	79.19	75.50	.798	.807	-4.887	19.259	15.886	326.967
35	.1828	.193	80.56	75.07	.811	.819	-4.555	19.591	16.287	362.014
36	.2003	.211	81.30	74.95	.819	.833	-4.372	19.773	16.394	396.665
37	.2177	.230	82.47	74.87	.831	.837	-4.090	20.056	16.470	431.118
38	.2354	.248	83.36	74.49	.840	.855	-3.873	20.272	16.820	466.165
39	.2526	.267	84.26	74.43	.849	.858	-3.654	20.492	16.881	500.222
40	.2707	.286	85.16	74.22	.858	.868	-3.435	20.711	17.072	536.061
41	.2873	.303	86.02	74.10	.866	.873	-3.227	20.919	17.179	568.930
42	.3055	.322	86.55	74.02	.872	.877	-3.096	21.050	17.259	604.967
43	.3405	.359	88.11	73.84	.887	.885	-2.717	21.429	17.423	674.270
44	.3758	.397	89.33	73.37	.900	.908	-2.420	21.725	17.862	744.166
45	.4105	.433	90.39	73.27	.910	.912	-2.163	21.982	17.955	812.874
46	.4457	.470	91.13	73.02	.918	.924	-1.983	22.163	18.181	882.572
47	.4803	.507	92.42	72.90	.931	.930	-1.669	22.477	18.294	951.082
48	.5155	.544	93.08	72.72	.938	.938	-1.508	22.638	18.464	1020.780
49	.5506	.581	93.90	72.64	.946	.942	-1.309	22.836	18.533	1090.280
50	.5857	.618	94.60	72.47	.953	.950	-1.140	23.006	18.694	1159.780
51	.6206	.655	95.06	72.41	.957	.953	-1.028	23.118	18.754	1228.864
52	.6555	.692	95.55	72.32	.962	.957	-0.907	23.239	18.836	1297.988
53	.6905	.729	96.01	72.23	.967	.961	-0.795	23.350	18.915	1367.290
54	.7253	.765	96.41	72.17	.971	.964	-0.699	23.447	18.968	1436.196
55	.7603	.802	96.99	72.08	.977	.973	-0.557	23.588	19.146	1505.998
56	.7953	.839	97.20	72.01	.979	.972	-0.506	23.639	19.117	1574.800
57	.8303	.876	97.30	71.87	.982	.978	-0.434	23.711	19.249	1644.103
58	.8655	.913	97.58	71.84	.983	.980	-0.415	23.731	19.277	1713.801
59	.9005	.950	97.93	71.81	.986	.981	-0.329	23.816	19.308	1783.103
60	.9353	.987	98.09	71.78	.988	.983	-0.289	23.856	19.335	1852.009
61	.9706	1.024	98.12	71.72	.992	.985	-0.282	23.863	19.391	1921.905
62	1.0057	1.061	98.31	71.71	1.000	.994	-0.188	24.134	19.561	2055.722
63	1.2907	1.362	99.23	71.53	1.000	1.000	-0.012	24.140	19.658	321.623
64	1.5765	1.664	99.26	71.43	1.000	1.000	-0.011	24.135	19.673	3688.712
65	1.8629	1.966	99.24	71.41	1.000	1.001	-0.016	24.162	19.693	4253.424
66	2.1481	2.267	99.35	71.39	1.001	1.001	-0.018	24.184	19.668	4816.335
67	2.4334	2.568	99.44	71.42	1.002	1.000	-0.038	24.179	19.688	5384.632
68	2.7194	2.670	99.42	71.40	1.001	1.001	-0.034	24.188	19.636	5951.325
69	3.0056	3.172	99.46	71.45	1.002	0.998	-0.042	24.188	19.636	5951.325

Table 55.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 6. GRID NO. 3

BOUNDARY LAYER PROPERTIES

LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y+=35$
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FREE STREAM VELOCITY =	99.381	99.381
FREE STREAM TEMPERATURE =	70.545	
WALL TEMPERATURE =	92.000	
WALL HEAT FLUX =	.07751	
FREE STREAM DENSITY =	.07622	
FREE STREAM KINEMATIC VISCOSITY =	.0001605	
DENSITY OF FLUID AT WALL =	.07326	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001722	
WALL/FREE STREAM DENSITY RATIO =	.96111	
LOCATION REYNOLDS NUMBER (REX) =	2280449.41	
INPUT VALUE OF VELOCITY DELTA =	1.30000	
INPUT VALUE OF TEMPERATURE DELTA =	1.30000	
CALCULATED DELTA =		.98546
DISPLACEMENT THICKNESS (DELSTAR) =	.00000	.12052
MOMENTUM THICKNESS (THETA) =	.08946	.08973
ENERGY-DISSIPATION THICKNESS =	.16234	.16256
ENTHALPY THICKNESS =	.00339	.00340
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.34742	1.34317
SHAPE FACTOR 32 (ENERGY/THETA) =	1.81469	1.81163
MOMENTUM THICKNESS REYNOLDS NUMBER =	4615.56	4629.45
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	6219.12	6218.12
SKIN FRICTION COEFFICIENT =	.003201	
FRICTION VELOCITY =	4.05536	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.21501
CLAUSERS 'DELTA' INTEGRAL =	-2.71332	-2.87025
CLAUSERS 'G' INTEGRAL =	16.24339	16.05896
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.11394	.11712
MOMENTUM THICKNESS - CONSTANT DENSITY =	.09010	.09038
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.26451	1.29586

LOCATION -X- 44.20000

Z = -6 INCHES

Table 56.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 6. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/ FT/SEC	U DEG.F	T U/UE	THETA UTAU	U(+)	T(+) Y(+)
1	.0064	.007	42.05	65.03	.423	.325 -14.138	10.368 6.410 12.620
2	.0074	.008	43.29	64.12	.436	.367 -13.830	10.676 7.246 14.583
3	.0086	.009	45.49	62.50	.458	.443 -13.288	11.218 8.737 16.938
4	.0101	.010	48.52	61.98	.488	.467 -12.542	11.964 9.213 19.882
5	.0115	.012	51.00	61.92	.513	.470 -11.930	12.576 9.271 22.630
6	.0126	.013	52.42	61.52	.527	.489 -11.580	12.926 9.644 24.789
7	.0144	.015	53.98	61.00	.543	.512 -11.195	13.311 10.115 28.322
8	.0164	.017	55.46	60.65	.558	.529 -10.830	13.676 10.437 32.247
9	.0184	.019	56.33	60.11	.567	.554 -10.617	13.889 10.935 36.173
10	.0201	.020	57.69	79.79	.580	.569 -10.281	14.225 11.235 39.510
11	.0214	.022	58.17	79.74	.585	.571 -10.068	14.344 11.275 42.061
12	.0233	.024	58.55	79.52	.589	.582 -10.068	14.438 11.478 45.790
13	.0254	.026	59.46	79.23	.598	.595 -9.845	14.661 11.750 49.912
14	.0274	.028	59.99	78.94	.604	.609 -9.713	14.793 12.012 53.837
15	.0292	.030	61.10	78.71	.615	.620 -9.440	15.666 12.227 57.370
16	.0334	.036	62.35	78.21	.627	.643 -9.130	15.376 12.686 69.539
17	.0425	.043	64.12	77.78	.645	.663 -8.696	15.810 13.082 83.474
18	.0495	.050	65.55	77.57	.660	.672 -8.343	15.163 13.271 97.213
19	.0554	.056	66.54	77.51	.670	.675 -8.099	16.407 13.325 108.794
20	.0624	.063	67.62	76.99	.680	.699 -7.833	16.673 13.805 122.533
21	.0694	.070	68.95	76.80	.694	.709 -7.503	17.003 13.985 136.272
22	.0754	.077	69.64	76.52	.701	.721 -7.335	17.171 14.239 148.048
23	.0823	.084	70.62	76.50	.711	.723 -7.093	17.413 14.263 175.591
24	.0894	.091	71.04	76.35	.715	.729 -6.989	17.517 14.398 175.526
25	.0954	.097	72.16	76.16	.726	.738 -6.712	17.794 14.573 187.302
26	.1023	.104	72.80	76.07	.733	.743 -6.555	17.951 14.655 200.845
27	.1094	.111	73.67	75.95	.741	.748 -6.339	18.167 14.768 214.780
28	.1153	.117	74.15	75.63	.746	.763 -6.223	18.283 15.062 226.360
29	.1225	.124	74.80	75.40	.753	.774 -6.062	18.444 15.271 240.492
30	.1294	.131	75.57	75.43	.760	.772 -5.872	18.634 15.399 254.035
31	.1464	.149	76.86	75.10	.773	.788 -5.554	18.952 15.543 287.401
32	.1642	.167	78.39	74.76	.789	.804 -5.177	19.329 15.861 322.337
33	.1814	.184	79.08	74.46	.796	.818 -5.006	19.500 16.135 356.096
34	.1994	.202	80.51	74.23	.810	.828 -4.653	19.853 16.348 391.425
35	.2165	.220	81.71	74.19	.822	.830 -4.358	20.148 16.385 424.988
36	.2345	.238	82.46	73.86	.830	.846 -4.166	20.340 16.691 460.317
37	.2514	.255	83.05	73.65	.836	.855 -4.026	20.480 16.881 493.486
38	.2694	.273	84.12	73.65	.846	.855 -3.762	20.744 16.879 528.815
39	.2864	.291	85.17	73.26	.857	.874 -3.503	21.003 17.243 562.182
40	.3043	.309	86.02	73.18	.866	.877 -3.294	21.212 17.511 597.314
41	.3393	.344	87.25	72.93	.878	.889 -2.991	21.515 17.539 666.009
42	.3743	.380	88.49	72.71	.890	.899 -2.686	22.820 17.749 734.705
43	.4095	.416	89.77	72.53	.903	.907 -2.370	22.136 17.910 803.792
44	.4445	.451	90.77	72.28	.913	.919 -2.124	22.382 18.139 872.488
45	.4794	.487	91.76	71.97	.923	.934 -1.879	22.627 18.425 940.986
46	.5144	.522	92.52	72.01	.931	.932 -1.691	22.815 18.385 1009.682
47	.5494	.556	93.06	71.82	.936	.941 -1.558	22.948 18.564 1078.377
48	.5844	.593	93.80	71.72	.944	.945 -1.375	23.131 18.652 1147.072
49	.6194	.629	94.61	71.57	.952	.952 -1.177	23.329 18.791 1215.767
50	.6545	.664	95.15	71.34	.957	.963 -1.044	23.462 19.002 1284.659
51	.6894	.700	95.48	71.23	.961	.968 -9.962	23.544 19.103 1353.157
52	.7244	.735	95.79	71.22	.964	.969 -8.886	23.620 19.118 1421.853
53	.7593	.771	96.42	71.11	.970	.974 -7.30	23.776 19.215 1490.352
54	.7946	.806	96.89	71.12	.975	.973 -6.164	23.892 19.206 1559.635
55	.8294	.842	97.22	71.03	.978	.977 -5.532	23.974 19.292 1627.938
56	.8643	.877	97.14	71.05	.977	.976 -5.533	23.953 19.273 1696.437
57	.8943	.913	97.42	70.89	.980	.984 -5.023	19.421 1765.132
58	.9343	.948	97.80	70.84	.984	.986 -3.990	24.116 19.460 1833.827
59	.9694	.984	97.94	70.93	.985	.982 -3.568	24.150 19.380 1902.719
60	1.0043	1.019	97.93	70.77	.985	.990 -3.568	24.148 19.534 1971.218
61	1.2765	1.295	99.16	70.58	.998	.998 -0.54	19.703 2505.470
62	1.5494	1.572	99.37	70.54	1.000	1.000 -0.04	19.744 3041.096
63	1.8223	1.849	99.40	70.55	1.000	1.000 -0.04	19.733 3576.722
64	2.0951	2.126	99.37	70.55	1.000	1.000 -0.02	24.504 19.733 4112.152
65	2.3674	2.402	99.48	70.51	1.001	1.002 -0.02	24.531 19.769 4646.600
66	2.6405	2.679	99.51	70.52	1.001	1.001 -0.02	24.537 19.759 5482.619
67	2.9137	2.957	99.50	70.49	1.001	1.002 -0.02	24.534 19.785 5718.834
68	3.1862	3.233	99.50	70.51	1.001	1.002 -0.02	24.535 19.769 6253.675
69	3.4583	3.509	99.56	70.54	1.002	1.000 -0.02	24.550 19.743 6787.730
70	3.7313	3.786	99.41	70.56	1.000	1.000 -0.02	24.513 19.718 7323.553
71	4.0044	4.063	99.57	70.55	1.002	1.000 -0.02	24.554 19.733 7859.571

Table 56.

JOB KLD7D TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 15. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY =	99.370	99.370
FREE STREAM TEMPERATURE =	71.969	
WALL TEMPERATURE =	93.760	
WALL HEAT FLUX =	.07696	
FREE STREAM DENSITY =	.07579	
FREE STREAM KINEMATIC VISCOSITY =	.0001618	
DENSITY OF FLUID AT WALL =	.07281	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001737	
WALL/FREE STREAM DENSITY RATIO =	.96063	
LOCATION REYNOLDS NUMBER (REX) =	2673238.91	
INPUT VALUE OF VELOCITY DELTA =	1.42000	
INPUT VALUE OF TEMPERATURE DELTA =	1.42000	
CALCULATED DELTA =		1.09253
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.12853	.12859
MOMENTUM THICKNESS (THETA) =	.09632	.09653
ENERGY-DISSIPATION THICKNESS =	.17524	.17539
ENTHALPY THICKNESS =	.00364	.00364
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.33446	1.33216
SHAPE FACTOR 32 (ENERGY/THETA) =	1.81938	1.81692
MOMENTUM THICKNESS REYNOLDS NUMBER =	4930.75	4941.60
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	6579.88	6583.01
SKIN FRICTION COEFFICIENT =	.003196	
FRICTION VELOCITY =	4.05276	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.17071
CLAUSERS 'DELTA' INTEGRAL =	-2.92181	-3.06369
CLAUSERS 'G' INTEGRAL =	16.76415	16.66496
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.12203	.12495
MOMENTUM THICKNESS - CONSTANT DENSITY =	.09701	.09723
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.25792	1.28510
LOCATION -X- =	52.22000	
Z = CENTERLINE		

Table 57.

JOB KLD70 TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 15.

GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE	UTAU	U(+)	T(+)	Y(+)
1	.0057	.005	37.63	86.42	.379	.337 -15.234	.9.285	6.750	11.43		
2	.0067	.006	41.10	85.47	.414	.380 -14.377	10.142	7.630	13.08		
3	.0077	.007	44.44	84.59	.447	.421 -13.554	10.965	8.438	15.033		
4	.0091	.008	47.85	83.83	.482	.456 -12.712	11.807	9.135	17.755		
5	.0100	.009	49.56	83.60	.499	.493 -11.292	12.227	9.351	19.505		
6	.0116	.011	52.30	83.02	.526	.493 -11.393	13.126	10.435	22.617		
7	.0131	.012	53.20	82.42	.535	.520 -11.393	13.305	10.637	25.534		
8	.0140	.013	53.92	82.20	.543	.530 -11.214	13.640	10.897	27.284		
9	.0161	.015	55.28	81.92	.556	.543 -10.879	13.977	11.045	31.368		
10	.0181	.017	56.65	81.76	.570	.551 -10.541	14.205	11.279	35.258		
11	.0219	.016	57.57	81.50	.579	.562 -10.314	14.420	11.429	38.758		
12	.0216	.020	58.21	81.34	.586	.570 -10.157	14.362	11.604	42.064		
13	.0224	.021	58.48	81.15	.589	.579 -10.068	14.431	11.808	44.592		
14	.0250	.023	59.34	80.82	.598	.594 -9.866	14.653	11.908	48.676		
15	.0269	.025	60.01	80.60	.604	.604 -9.711	14.808	12.114	52.371		
16	.0289	.026	60.73	80.41	.611	.611 -9.534	14.985	12.289	56.260		
17	.0305	.028	61.02	80.28	.614	.619 -9.463	15.056	12.403	59.372		
18	.0371	.034	62.66	79.85	.631	.638 -9.059	15.460	12.801	72.207		
19	.0437	.040	64.44	79.50	.648	.654 -8.619	15.900	13.120	85.042		
20	.0507	.046	65.72	79.20	.661	.668 -8.302	16.216	13.399	98.655		
21	.0570	.052	66.82	78.93	.672	.682 -8.032	16.487	13.675	110.907		
22	.0639	.059	67.78	78.72	.682	.690 -7.794	16.725	13.841	124.325		
23	.0709	.065	68.83	78.48	.693	.701 -7.536	16.983	14.063	137.938		
24	.0769	.070	69.79	78.25	.702	.712 -7.298	17.221	14.277	149.606		
25	.0837	.077	70.35	78.08	.708	.719 -7.161	17.358	14.425	162.830		
26	.0907	.083	71.43	77.83	.719	.731 -6.895	17.624	14.656	176.43		
27	.0969	.089	72.19	77.71	.726	.736 -6.707	17.812	14.767	188.51		
28	.1039	.095	72.79	77.50	.733	.746 -6.558	17.961	14.961	202.11		
29	.1109	.102	73.52	77.43	.740	.749 -6.378	18.140	15.024	215.727		
30	.1169	.107	74.10	77.45	.746	.748 -6.235	18.284	15.009	227.395		
31	.1237	.113	74.53	77.23	.750	.759 -6.129	18.390	15.214	240.619		
32	.1308	.120	75.30	77.05	.758	.767 -5.940	18.579	15.380	254.426		
33	.1478	.135	76.72	76.82	.772	.777 -5.588	18.931	15.589	287.466		
34	.1656	.152	78.02	76.46	.785	.794 -5.269	19.250	15.916	322.102		
35	.1829	.167	78.97	76.10	.795	.810 -5.033	19.486	16.249	355.746		
36	.2009	.184	80.22	75.99	.807	.815 -4.725	19.794	16.347	390.750		
37	.2179	.199	81.26	75.83	.818	.823 -4.469	20.050	16.495	423.810		
38	.2359	.216	82.43	75.65	.830	.831 -4.280	20.339	16.668	458.815		
39	.2527	.231	83.15	75.42	.837	.841 -4.001	20.517	16.874	491.486		
40	.2709	.248	83.59	75.15	.841	.854 -3.894	20.625	17.123	526.880		
41	.2879	.264	84.54	75.02	.851	.860 -3.659	20.860	17.242	559.940		
42	.3057	.280	85.34	74.86	.859	.867 -3.461	21.058	17.390	594.556		
43	.3541	.324	87.05	74.54	.876	.882 -3.040	21.479	17.685	688.680		
44	.4020	.368	88.61	74.16	.892	.899 -2.656	21.863	18.034	781.831		
45	.4503	.412	90.12	73.88	.907	.912 -2.262	22.237	18.298	875.761		
46	.4979	.456	91.47	73.57	.920	.926 -1.950	22.569	18.578	968.329		
47	.5457	.500	92.35	73.40	.929	.934 -1.733	22.786	18.733	1061.286		
48	.5939	.544	93.13	73.12	.937	.947 -1.541	22.978	18.993	1155.021		
49	.6421	.588	94.19	73.03	.948	.951 -1.279	23.240	19.078	1248.756		
50	.69	.632	94.86	72.78	.955	.963 -1.113	23.406	19.301	1342.296		
51	.73	.675	95.46	72.75	.961	.964 -0.964	23.555	19.335	1435.059		
52	.7859	.719	95.97	72.64	.966	.969 -0.840	23.679	19.433	1528.05		
53	.8341	.763	96.16	72.47	.968	.977 -0.792	23.727	19.589	1622.180		
54	.8819	.807	96.90	72.41	.975	.980 -0.609	23.910	19.648	1715.097		
55	.9299	.851	96.97	72.33	.976	.984 -0.591	23.928	19.722	1808.443		
56	.9779	.895	97.23	72.25	.978	.987 -0.535	23.984	19.793	1901.789		
57	1.0259	.939	97.58	72.27	.982	.986 -0.441	24.078	19.777	1995.135		
58	1.0737	.983	97.69	72.16	.983	.991 -0.415	24.104	19.875	2088.092		
59	1.1217	1.027	98.02	72.11	.986	.993 -0.334	24.185	19.922	2181.438		
60	1.1701	1.071	98.06	72.12	.987	.993 -0.319	24.200	19.914	2275.562		
61	1.2179	1.115	98.57	72.08	.992	.995 -0.198	24.321	19.954	2368.519		
62	1.2659	1.159	98.37	72.05	.990	.996 -0.248	24.371	19.980	2461.865		
63	1.3136	1.202	99.09	72.02	.997	.998 -0.069	24.450	20.006	2554.628		
64	1.3617	1.246	99.09	71.98	.997	1.000 -0.068	24.451	20.042	2648.168		
65	1.4101	1.291	99.15	71.95	.998	1.001 -0.053	24.466	20.070	2742.292		
66	1.4576	1.334	99.19	71.99	.998	1.000 -0.044	24.475	20.032	2834.666		
67	1.5057	1.378	99.37	72.03	1.000	1.000 -0.001	24.520	19.992	2928.207		
68	1.5809	1.722	99.54	71.88	1.002	1.004 -0.042	24.561	20.133	3657.861		
69	2.2557	2.065	99.61	71.82	1.002	1.007 -0.060	24.579	20.189	4386.738		
70	2.6309	2.408	99.66	71.80	1.003	1.008 -0.071	24.590	20.209	5116.393		
71	3.0061	2.752	99.61	71.86	1.002	1.005 -0.060	24.579	20.153	5846.048		

Table 57.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 7. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY =	98.738	98.738
FREE STREAM TEMPERATURE =	70.580	
WALL TEMPERATURE =	93.140	
WALL HEAT FLUX =	.07684	
FREE STREAM DENSITY =	.07622	
FREE STREAM KINEMATIC VISCOSITY =	.0001605	
DENSITY OF FLUID AT WALL =	.07311	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001728	
WALL/FREE STREAM DENSITY RATIO =	.95919	
LOCATION REYNOLDS NUMBER (IREX) =	3080367.06	
INPUT VALUE OF VELOCITY DELTA =	1.90000	
INPUT VALUE OF TEMPERATURE DELTA =	1.90000	
CALCULATED DELTA =		1.36442
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.15169	.15163
MOMENTUM THICKNESS (THETA) =	.11463	.11490
ENERGY-DISSIPATION THICKNESS =	.20951	.20974
ENTHALPY THICKNESS =	.00489	.00490
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.32332	1.31964
SHAPE FACTOR 32 (ENERGY/THETA) =	1.82776	1.82540
MOMENTUM THICKNESS REYNOLDS NUMBER =	5875.08	5889.18
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	774.63	7771.62
SKIN FRICTION COEFFICIENT =	.003124	
FRICTION VELOCITY =	3.98476	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.11885
CLAUSERS 'DELTA' INTEGRAL =	-3.47557	-3.63574
CLAUSERS 'G' INTEGRAL =	19.23045	19.01403
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.14353	.14673
MOMENTUM THICKNESS - CONSTANT DENSITY =	.11547	.11576
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.24296	1.26752

LOCATION -X- 60.10001

Z = CENTERLINE

Table 58.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 7. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/	U	T	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0065	.005	40.01	85.17	.405	.393	-14.739	10.040	7.253	12.548
2	.0076	.006	41.89	84.27	.424	.393	-14.266	10.513	8.072	14.661
3	.0091	.007	45.56	83.42	.461	.431	-13.344	11.434	8.847	17.544
4	.0106	.008	48.53	82.50	.492	.454	-12.600	12.179	9.321	20.426
5	.0115	.008	49.85	82.50	.505	.472	-12.269	12.510	9.684	22.155
6	.0137	.010	52.38	81.75	.530	.505	-11.635	13.144	10.366	26.383
7	.0155	.011	53.43	81.36	.541	.522	-11.371	13.407	10.720	29.841
8	.0175	.013	55.00	81.13	.557	.532	-10.977	13.802	10.924	33.685
9	.0192	.014	55.96	80.66	.567	.553	-10.736	14.043	11.354	36.951
10	.0208	.015	56.80	80.45	.575	.563	-10.524	14.255	11.548	40.026
11	.0230	.017	57.70	80.24	.584	.572	-10.298	14.481	11.736	44.253
12	.0243	.018	58.00	80.07	.587	.579	-10.223	14.556	11.893	46.751
13	.0266	.020	59.00	79.92	.598	.586	-9.972	14.807	12.026	51.171
14	.0281	.021	59.30	79.76	.601	.593	-9.898	14.881	12.171	54.053
15	.0345	.025	61.04	79.20	.618	.618	-9.460	15.128	12.682	66.351
16	.0416	.031	62.59	78.78	.634	.636	-9.071	15.708	13.064	79.994
17	.0485	.036	63.95	78.35	.648	.656	-8.731	16.047	13.457	93.252
18	.0546	.040	65.18	78.15	.660	.665	-8.422	16.357	13.641	104.974
19	.0617	.045	66.27	77.83	.671	.679	-8.148	16.631	13.933	118.617
20	.0666	.050	67.16	77.58	.680	.690	-7.919	16.860	14.154	131.875
21	.0746	.055	67.93	77.46	.686	.695	-7.731	17.047	14.266	143.404
22	.0815	.060	68.87	77.38	.697	.698	-7.496	17.283	14.336	156.663
23	.0884	.065	69.75	77.04	.706	.713	-7.273	17.505	14.646	169.922
24	.0944	.069	70.31	76.87	.712	.721	-7.134	17.645	14.808	181.451
25	.1015	.074	71.31	76.84	.722	.723	-6.883	17.896	14.833	195.094
26	.1085	.080	72.16	76.79	.731	.725	-6.670	18.109	14.877	208.545
27	.1145	.084	72.62	76.60	.735	.733	-6.554	18.225	15.052	220.074
28	.1215	.089	73.20	76.46	.741	.739	-6.408	18.371	15.179	233.525
29	.1285	.094	73.80	76.38	.747	.743	-6.259	18.520	15.250	246.975
30	.1456	.107	74.94	75.96	.759	.761	-6.071	18.808	15.627	279.834
31	.1631	.120	76.20	75.68	.772	.774	-5.657	19.422	15.882	313.461
32	.1806	.132	77.42	75.49	.784	.782	-5.350	19.429	16.058	347.087
33	.1985	.146	78.58	75.23	.796	.794	-5.059	19.720	16.296	381.483
34	.2156	.158	79.43	74.87	.804	.810	-4.846	19.933	16.622	414.341
35	.2335	.171	80.34	74.73	.814	.816	-4.616	20.163	16.749	448.737
36	.2505	.184	80.80	74.75	.818	.815	-4.502	20.277	16.733	481.403
37	.2687	.197	82.20	74.53	.833	.825	-4.004	20.628	17.133	516.375
38	.2854	.209	82.78	74.31	.838	.835	-4.004	20.775	17.133	548.465
39	.3035	.222	83.47	74.39	.845	.831	-3.831	20.948	17.062	583.244
40	.3514	.258	84.90	73.85	.860	.855	-3.472	21.306	17.553	675.286
41	.3994	.293	86.67	73.17	.878	.885	-3.029	21.749	18.168	767.520
42	.4474	.328	88.38	73.01	.895	.892	-2.600	22.179	18.318	859.754
43	.4956	.363	89.28	72.80	.904	.902	-2.372	22.407	18.508	952.372
44	.5437	.399	90.47	72.74	.916	.904	-2.075	22.703	18.561	1044.798
45	.5915	.434	90.03	72.48	.912	.916	-2.186	22.593	18.796	1136.647
46	.6396	.469	90.86	72.20	.920	.928	-1.978	22.801	19.052	1229.073
47	.6876	.504	92.07	72.05	.932	.935	-1.674	23.205	19.193	1321.307
48	.7355	.539	92.48	71.91	.937	.941	-1.569	23.209	19.321	1413.349
49	.7837	.574	93.48	71.75	.947	.948	-1.319	23.460	19.464	1505.967
50	.8316	.610	93.97	71.67	.952	.952	-1.196	23.583	19.537	1598.009
51	.8795	.645	94.44	71.51	.957	.959	-1.078	23.701	19.682	1690.050
52	.9274	.680	95.09	71.28	.963	.969	-9.915	23.864	19.892	1782.092
53	.9755	.715	95.43	71.39	.967	.984	-8.829	23.949	19.787	1874.518
54	1.0237	.750	95.66	71.19	.969	.973	-7.772	24.007	19.971	1967.136
55	1.0715	.785	96.02	71.26	.972	.970	-6.881	24.097	19.911	2058.986
56	1.1194	.820	96.42	71.12	.977	.976	-5.881	24.197	20.034	2151.027
57	1.1675	.856	96.84	71.12	.981	.976	-4.75	24.303	20.035	2243.453
58	1.2158	.891	96.88	70.98	.981	.982	-4.66	24.313	20.163	2336.264
59	1.2636	.926	97.03	71.04	.983	.979	-4.29	24.350	20.106	2428.113
60	1.3112	.961	97.40	70.95	.986	.984	-3.36	24.443	20.188	2515.578
61	1.3595	.996	97.39	70.81	.986	.990	-3.38	24.441	20.315	2612.389
62	1.4074	1.032	97.68	70.80	.989	.990	-2.64	24.515	20.323	2704.430
63	1.4551	1.066	97.77	70.78	.990	.991	-2.42	24.537	20.344	2796.088
64	1.5035	1.102	97.97	70.76	.992	.992	-1.94	24.585	20.364	2885.090
65	1.5606	1.364	98.46	70.65	.997	.997	-0.69	24.710	20.460	3575.271
66	2.2177	1.625	98.70	70.57	1.000	1.000	-0.09	24.770	20.536	4261.453
67	2.5745	1.887	98.74	70.58	1.000	1.000	.00	24.780	20.530	4947.057
68	2.9316	2.149	98.77	70.59	1.000	1.000	.007	24.786	20.515	5633.239
69	3.2885	2.410	98.77	70.57	1.000	1.000	.008	24.787	20.536	6319.036
70	3.6461	2.672	98.74	70.56	1.000	1.001	.000	24.779	20.546	7006.178
71	4.0034	2.934	98.77	70.57	1.000	1.001	.008	24.787	20.540	7692.743

Table 58.

JOB KLD70 TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 18. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y^+=35$
FREE STREAM VELOCITY	99.159	99.159
FREE STREAM TEMPERATURE	72.069	
WALL TEMPERATURE	94.630	
WALL HEAT FLUX	.07715	
FREE STREAM DENSITY	.07553	
KINEMATIC VISCOSITY	.0001623	
DENSITY OF FLUID AT WALL	.07246	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001747	
WALL/FREE STREAM DENSITY RATIO	.95930	
LOCATION REYNOLDS NUMBER (REX)	3069175.94	
INPUT VALUE OF VELOCITY DELTA	1.90000	
INPUT VALUE OF TEMPERATURE DELTA	1.90000	
CALCULATED DELTA		1.32203
DISPLACEMENT THICKNESS (DELSTAR)	.00000	
MOMENTUM THICKNESS (THETA)	.15495	.15471
ENERGY-DISSIPATION THICKNESS	.11579	.11624
ENTHALPY THICKNESS	.21087	.21131
SHAPE FACTOR 12 (DELSTAR/THETA)	.00480	.00482
SHAPE FACTOR 32 (ENERGY/THETA)	1.33824	1.33099
MOMENTUM THICKNESS REYNOLDS NUMBER	1.82114	1.81787
DISPLACEMENT THICKNESS REYNOLDS NUMBER	5893.54	5916.42
SKIN FRICTION COEFFICIENT	7886.97	7874.73
FRICITION VELOCITY	.003068	
LAW OF THE WALL CONSTANT (K)	3.96540	
LAW OF THE WALL CONSTANT (C)	.41000	
WAKE STRENGTH	5.00000	.18917
CLAUSERS 'DELTA' INTEGRAL	-3.54638	-3.74826
CLAUSERS 'G' INTEGRAL	20.95349	20.50044
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.14599	.14989
MOMENTUM THICKNESS - CONSTANT DENSITY	.11664	.11711
SHAPE FACTOR 12 - CONSTANT DENSITY	1.25158	1.27995

LOCATION -X- 60.30000

Z = -6 INCHES

Table 59.

JOB KLD70 TAPE 3166R- FILES 69-92, RUNS 6.C1-6.24 03/27/79
 RUN NO. 6. POINT 18. GRID NO. 3

REDUCED PPROFILE DATA

N	INCHES	Y/	U	T	U/UE	THETA	U-TAU	U(+)	T(+)	Y(+)
1	.0053	.006	43.74	85.61	.441	.400	-13.976	11.030	8.064	15.754
2	.0097	.007	46.30	85.02	.467	.426	-13.331	11.675	8.588	18.402
3	.0106	.008	47.96	84.30	.484	.458	-12.912	12.094	9.229	20.104
4	.0115	.009	49.32	84.06	.497	.468	-12.569	12.437	9.446	21.806
5	.0123	.009	50.41	83.94	.508	.474	-12.293	12.713	9.558	23.320
6	.0141	.011	52.45	83.27	.529	.504	-11.780	13.226	10.153	26.724
7	.0159	.011	53.49	83.15	.539	.509	-11.517	13.489	10.261	30.128
8	.0165	.013	54.43	82.96	.549	.517	-11.280	13.726	10.433	31.263
9	.0186	.014	55.05	82.47	.555	.539	-11.125	13.881	10.872	34.856
10	.0205	.016	56.12	82.16	.566	.553	-10.854	14.152	11.144	38.828
11	.0225	.017	56.75	81.82	.572	.568	-10.696	14.310	11.452	42.611
12	.0241	.018	57.51	81.64	.580	.576	-10.503	14.503	11.809	45.637
13	.0255	.019	57.84	81.57	.583	.579	-10.421	14.585	11.677	48.284
14	.0275	.021	58.65	81.39	.591	.587	-10.216	14.790	11.832	52.067
15	.0294	.022	59.27	81.13	.598	.598	-10.059	14.948	12.065	55.660
16	.0317	.024	59.76	80.98	.603	.605	-9.935	15.071	12.202	60.010
17	.0331	.025	60.34	80.92	.609	.608	-9.789	15.217	12.250	62.658
18	.0395	.030	61.95	80.48	.625	.627	-9.364	15.622	12.649	74.762
19	.0466	.035	63.25	80.01	.638	.648	-9.055	15.951	13.065	88.190
20	.0533	.040	64.34	79.93	.649	.652	-8.782	16.224	13.409	100.862
21	.0596	.045	65.44	79.63	.660	.665	-8.53	16.503	13.699	112.777
22	.0667	.050	66.64	79.30	.672	.679	-8.200	16.806	13.992	126.205
23	.0733	.055	67.59	79.06	.682	.690	-7.962	17.044	13.913	138.688
24	.0795	.060	68.01	78.85	.686	.700	-7.856	17.150	14.107	150.414
25	.0865	.065	69.29	78.76	.699	.704	-7.533	17.474	14.187	163.653
26	.0934	.071	70.01	78.59	.706	.711	-7.352	17.654	14.339	176.702
27	.0993	.075	70.43	78.43	.710	.718	-7.244	17.762	14.476	187.861
28	.1067	.081	71.27	78.21	.719	.728	-7.033	17.973	14.672	201.856
29	.1135	.086	71.99	78.12	.726	.732	-6.851	18.155	14.752	214.717
30	.1195	.090	72.39	77.82	.730	.745	-6.750	18.256	15.027	226.065
31	.1265	.096	72.87	77.54	.735	.758	-6.630	18.376	15.275	239.304
32	.1336	.101	73.54	77.43	.742	.762	-6.460	18.546	15.370	252.732
33	.1503	.114	74.53	77.35	.752	.766	-6.211	18.795	15.442	284.316
34	.1681	.127	76.10	77.25	.767	.770	-5.815	19.191	15.536	317.981
35	.1859	.141	77.14	76.87	.776	.787	-5.552	19.454	15.878	351.646
36	.2033	.154	78.06	76.45	.787	.806	-5.320	19.686	16.246	384.554
37	.2203	.167	78.81	76.29	.795	.813	-5.131	19.876	16.395	416.706
38	.2364	.180	79.71	76.19	.804	.817	-4.906	20.101	16.482	450.938
39	.2555	.193	80.61	75.95	.813	.828	-4.679	20.328	16.700	483.279
40	.2736	.207	81.21	75.72	.819	.838	-4.527	20.479	16.904	517.511
41	.2906	.220	82.14	75.63	.828	.842	-4.292	20.714	16.981	549.663
42	.3087	.234	82.77	75.68	.835	.840	-4.133	20.873	16.935	583.895
43	.3565	.270	84.72	75.32	.854	.856	-3.642	21.365	17.263	674.299
44	.4045	.306	86.25	74.63	.870	.887	-3.255	21.751	17.879	765.080
45	.4525	.342	88.09	74.45	.886	.894	-2.791	22.215	18.035	855.862
46	.5007	.379	89.06	74.34	.896	.899	-2.548	22.458	18.132	947.021
47	.5463	.415	89.92	74.09	.907	.911	-2.331	22.675	18.362	1037.046
48	.5964	.451	90.76	73.78	.915	.924	-2.118	22.888	16.637	1128.017
49	.6445	.488	91.91	73.66	.927	.930	-1.828	23.178	18.745	1218.988
50	.6924	.524	92.90	73.40	.937	.941	-1.563	23.443	18.975	1309.580
51	.7405	.560	93.44	73.31	.942	.945	-1.441	23.565	19.055	1490.551
52	.7885	.596	94.08	73.29	.949	.946	-1.282	23.724	19.170	1491.332
53	.8365	.633	94.66	72.94	.955	.961	-1.130	23.876	19.389	1582.114
54	.8845	.669	95.03	72.91	.958	.963	-1.041	23.965	19.417	1672.895
55	.9325	.705	95.66	72.95	.965	.961	-8.883	24.123	19.373	1763.677
56	.9807	.742	95.94	72.74	.968	.970	-8.811	24.196	19.569	1854.836
57	1.0263	.778	96.09	72.65	.969	.974	-7.773	24.443	19.649	1944.861
58	1.0763	.814	96.84	72.68	.977	.973	-5.584	24.422	19.614	2035.643
59	1.1244	.851	96.99	72.69	.976	.973	-5.546	24.460	19.610	2126.614
60	1.1725	.887	97.23	72.53	.981	.980	-4.887	24.520	19.751	2217.584
61	1.2207	.923	97.37	72.49	.982	.981	-4.552	24.555	19.790	2308.744
62	1.2667	.960	97.60	72.48	.984	.982	-3.992	24.614	19.800	2399.526
63	1.3161	.996	97.92	72.45	.986	.983	-3.122	24.694	19.827	2489.172
64	1.3645	1.032	97.99	72.40	.988	.985	-2.94	24.712	19.865	2580.710
65	1.4123	1.068	98.22	72.38	.990	.986	-2.38	24.768	19.885	2671.114
66	1.4601	1.104	98.51	72.30	.993	.990	-1.64	24.842	19.958	2761.517
67	1.5087	1.141	98.44	72.31	.993	.989	-1.181	24.825	19.988	2853.433
68	1.5837	1.425	99.03	72.14	.999	.997	-0.34	24.973	20.104	3562.664
69	2.2586	1.708	99.07	72.08	1.000	1.000	-0.034	24.985	20.158	4271.705
70	2.6335	1.992	99.19	72.05	1.000	1.000	-0.007	25.013	20.178	4980.747
71	3.0083	2.276	99.22	72.08	1.000	1.000	-0.014	25.021	20.157	5689.599

Table 59.

JOB KL070 TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 19. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y^+=35$
FREE STREAM VELOCITY	99.283	99.283
FREE STREAM TEMPERATURE	70.154	
WALL TEMPERATURE	94.020	
WALL HEAT FLUX	.07837	
FREE STREAM DENSITY	.07580	
FREE STREAM KINEMATIC VISCOSITY	.0001613	
DENSITY OF FLUID AT WALL	.07254	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001744	
WALL/FREE STREAM DENSITY RATIO	.95690	
LOCATION REYNOLDS NUMBER (REX)	3500468.16	
INPUT VALUE OF VELOCITY DELTA	1.90000	
INPUT VALUE OF TEMPERATURE DELTA	1.90000	
CALCULATED DELTA		1.44051
DELTA 99.5% INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.16285	.16280
MOMENTUM THICKNESS (THETA)	.12147	.12179
ENERGY-DISSIPATION THICKNESS	.22103	.22130
ENTHALPY THICKNESS	.00577	.00578
SHAPE FACTOR 12 (DELSTAR/THETA)	1.34069	1.33679
SHAPE FACTOR 32 (ENERGY/THETA)	1.81970	1.81711
MOMENTUM THICKNESS REYNOLDS NUMBER	6229.94	6246.37
DISPLACEMENT THICKNESS REYNOLDS NUMBER	8352.39	8350.08
SKIN FRICTION COEFFICIENT	.003055	
FRICITION VELOCITY	3.96652	
LAW OF THE WALL CONSTANT (K)	.41000	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.15009
CLAUSERS 'DELTA' INTEGRAL	-3.75329	-3.93035
CLAUSERS 'G' INTEGRAL	21.69048	21.44473
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.15352	.15702
MOMENTUM THICKNESS - CONSTANT DENSITY	.12246	.12280
SHAPE FACTOR 12 - CONSTANT DENSITY	1.25360	1.27875
LOCATION -X-	68.25000	
Z = CENTERLINE		

Table 60.

JOB KLD70 TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79
 RUN NO. 6. POINT 19. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/	U	T	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0071	.005	41.22	85.75	.915	.347	-14.639	10.391	7.286	13.515
2	.0082	.006	43.69	84.82	.940	.385	-14.017	11.014	8.106	15.600
3	.0092	.006	46.23	84.30	.466	.407	-13.374	11.656	8.567	17.495
4	.0101	.007	48.06	83.80	.484	.428	-12.908	12.122	9.002	19.201
5	.0111	.006	49.41	83.28	.498	.450	-12.573	12.452	9.464	21.097
6	.0130	.009	51.66	82.56	.520	.480	-12.006	13.025	10.100	24.698
7	.0142	.010	52.58	82.19	.530	.496	-11.774	13.256	10.423	26.973
8	.0153	.011	53.60	81.85	.540	.510	-11.517	13.513	10.719	29.058
9	.0174	.013	54.74	81.40	.551	.529	-11.229	13.801	11.123	33.038
10	.0194	.013	55.76	81.13	.562	.540	-10.967	14.063	11.356	36.829
11	.0214	.015	56.65	80.94	.571	.548	-10.749	14.282	11.529	40.620
12	.0230	.016	57.41	80.79	.578	.554	-10.558	14.472	11.657	43.653
13	.0245	.017	57.64	80.69	.581	.559	-10.499	14.531	11.745	46.496
14	.0264	.018	58.44	80.43	.589	.569	-10.296	14.734	11.974	50.098
15	.0282	.020	58.88	80.20	.593	.579	-10.167	14.843	12.174	53.510
16	.0304	.021	59.70	79.96	.601	.589	-9.980	15.050	12.390	57.680
17	.0320	.022	60.23	79.78	.607	.597	-9.847	15.183	12.545	60.713
18	.0363	.027	61.51	79.29	.620	.617	-9.524	15.507	12.979	72.654
19	.04555	.032	63.07	78.96	.635	.631	-9.129	15.901	13.272	86.302
20	.05233	.036	64.44	78.58	.649	.647	-8.784	16.247	13.605	99.191
21	.05622	.040	65.27	78.36	.657	.656	-8.575	16.456	13.794	110.375
22	.0652	.045	66.56	78.13	.670	.666	-8.251	16.779	14.002	123.643
23	.0722	.050	67.16	77.70	.677	.684	-8.095	16.936	14.381	136.911
24	.0784	.054	68.30	77.52	.688	.691	-7.811	17.219	14.537	148.664
25	.0852	.059	69.01	77.35	.695	.698	-7.632	17.398	14.687	161.553
26	.09222	.064	69.69	77.28	.702	.701	-7.461	17.569	14.751	174.821
27	.09833	.068	70.49	77.10	.710	.709	-7.259	17.771	14.905	186.384
28	.1055	.073	71.02	76.93	.715	.716	-7.125	17.905	15.057	200.031
29	.1126	.078	71.94	76.71	.725	.725	-6.894	18.136	15.252	213.489
30	.1185	.082	72.76	76.49	.733	.734	-6.688	18.343	15.445	224.673
31	.1252	.087	72.78	76.60	.733	.730	-6.680	18.350	15.347	237.373
32	.1323	.092	73.50	76.67	.740	.727	-6.499	18.531	15.291	250.831
33	.1496	.104	74.32	75.83	.749	.762	-6.294	18.736	16.025	283.623
34	.167C	.116	75.18	75.60	.757	.772	-6.078	18.953	16.234	316.604
35	.1844	.128	76.31	75.44	.769	.779	-5.791	19.239	16.374	349.586
36	.2024	.141	77.35	75.01	.779	.797	-5.529	19.501	16.753	383.705
37	.2192	.152	78.42	74.92	.790	.800	-5.261	19.769	16.832	415.549
38	.2378	.165	79.26	74.76	.798	.807	-5.046	19.982	16.968	450.805
39	.2542	.176	80.03	74.61	.806	.813	-4.854	20.177	17.099	481.891
40	.2724	.189	80.61	74.54	.812	.816	-4.708	20.322	17.163	516.389
41	.2893	.201	81.49	74.49	.821	.818	-4.486	20.544	17.211	548.423
42	.3076	.214	82.09	74.09	.827	.835	-4.333	20.697	17.563	583.111
43	.3554	.247	83.62	73.86	.844	.845	-3.899	21.131	17.764	673.715
44	.4035	.260	85.46	73.54	.861	.858	-3.486	21.545	18.041	764.888
45	.4516	.314	86.76	72.95	.874	.883	-3.157	21.873	18.560	856.062
46	.4995	.347	87.99	72.81	.886	.889	-2.846	22.184	18.689	946.856
47	.5472	.380	89.10	72.55	.897	.900	-2.567	22.463	18.917	1037.271
48	.5955	.413	90.02	72.25	.907	.912	-2.335	22.695	19.179	1128.823
49	.6433	.447	90.96	72.14	.916	.917	-2.099	22.931	19.278	1219.428
50	.6914	.480	92.45	71.97	.931	.924	-1.771	23.306	19.424	1310.601
51	.7394	.513	93.05	71.80	.937	.931	-1.571	23.460	19.574	1401.585
52	.7872	.546	93.98	71.67	.947	.936	-1.338	23.693	19.689	1592.189
53	.8352	.590	94.97	71.50	.951	.947	-1.235	23.795	19.842	1583.173
54	.8832	.613	94.97	71.37	.957	.949	-1.068	23.943	19.954	1674.157
55	.9312	.646	95.48	71.37	.962	.949	-0.959	24.072	19.959	1765.140
56	.9792	.680	95.94	71.22	.966	.955	-0.844	24.187	20.092	1856.124
57	1.0275	.713	96.38	71.05	.971	.962	-0.732	24.299	20.237	1937.676
58	1.0756	.747	96.55	70.95	.973	.967	-0.688	24.342	20.325	2038.850
59	1.1231	.780	96.95	70.87	.976	.970	-0.589	24.442	20.401	2128.885
60	1.1713	.813	96.99	70.87	.977	.970	-0.579	24.451	20.401	2220.248
61	1.2194	.847	97.51	70.74	.982	.975	-0.486	24.583	20.508	2311.421
62	1.2675	.880	97.84	70.65	.985	.979	-0.364	24.666	20.592	2402.595
63	1.3155	.913	97.82	70.69	.985	.978	-0.370	24.666	20.558	2492.631
64	1.3636	.947	97.94	70.64	.986	.980	-0.338	24.692	20.599	2584.752
65	1.4114	.980	98.17	70.53	.989	.984	-0.282	24.748	20.695	2675.356
66	1.4590	1.013	98.25	70.51	.990	.985	-0.261	24.769	20.715	2765.582
67	1.5074	1.046	98.40	70.54	.991	.984	-0.222	24.809	20.689	2857.324
68	1.8825	1.307	99.05	70.30	.998	.994	-0.060	24.971	20.899	3568.323
69	2.2574	1.567	99.27	70.18	1.000	.999	-0.003	25.028	21.002	4278.944
70	2.6326	1.828	99.23	70.10	1.001	.999	-0.013	25.017	21.074	4990.133
71	3.0072	2.088	99.35	70.18	1.001	.999	-0.016	25.046	21.010	5700.184

Table 60.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 9. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y+ = 35$
FREE STREAM VELOCITY	= 98.553	98.553
FREE STREAM TEMPERATURE	= 69.650	
WALL TEMPERATURE	= 92.640	
WALL HEAT FLUX	= .07726	
FREE STREAM DENSITY	= .07613	
FREE STREAM KINEMATIC VISCOSITY	= .0001605	
DENSITY OF FLUID AT WALL	= .07296	
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001730	
WALL/FREE STREAM DENSITY RATIO	= .95838	
LOCATION REYNOLDS NUMBER (REX)	= 3894773.62	
INPUT VALUE OF VELOCITY DELTA	= 2.40000	
INPUT VALUE OF TEMPERATURE DELTA	= 2.40000	
CALCULATED DELTA	= 1.64064	
DELTA 99.5% INPUT	= .00000	
DISPLACEMENT THICKNESS (DELSTAR)	= .19124	.19131
MOMENTUM THICKNESS (THETA)	= .14423	.14436
ENERGY-DISSIPATION THICKNESS	= .26267	.26274
ENTHALPY THICKNESS	= .00614	.00614
SHAPE FACTOR 12 (DELSTAR/THETA)	= 1.32590	1.32522
SHAPE FACTOR 32 (ENERGY/THETA)	= 1.82115	1.82003
MOMENTUM THICKNESS REYNOLDS NUMBER	= 7379.78	7386.28
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 9784.82	9788.42
SKIN FRICTION COEFFICIENT	= .002922	
FRICTION VELOCITY	= 3.84796	
LAW OF THE WALL CONSTANT (K)	= .41000	
LAW OF THE WALL CONSTANT (C)	= 5.00000	
WAKE STRENGTH	= .21554	
CLAUSERS 'DELTA' INTEGRAL	= -4.61443	-4.74245
CLAUSERS 'G' INTEGRAL	= 26.08754	26.04504
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .18263	.18517
MOMENTUM THICKNESS - CONSTANT DENSITY	= .14533	.14546
SHAPE FACTOR 12 - CONSTANT DENSITY	= 1.25669	1.27296

LOCATION -X- 76.12000

Z = +6 INCHES

Table 61.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 9. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/	U	T	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0049	.003	31.00	85.82	.315	.297	-17.556	8.056	5.951	9.136
2	.0060	.004	35.15	84.92	.357	.336	-16.478	9.134	6.735	11.174
3	.0079	.005	42.29	83.73	.429	.388	-14.622	10.989	7.772	14.695
4	.0100	.006	46.40	82.86	.471	.424	-13.554	12.057	8.510	18.586
5	.0120	.007	48.39	82.04	.491	.461	-13.036	12.576	9.241	22.292
6	.0137	.008	50.18	81.63	.509	.479	-12.572	13.039	9.602	25.442
7	.0150	.009	51.00	81.36	.517	.491	-12.359	13.252	9.841	27.851
8	.0171	.010	52.26	81.06	.530	.504	-12.030	13.582	10.100	31.743
9	.0190	.012	53.15	80.59	.539	.524	-11.800	13.812	10.510	35.263
10	.0211	.013	54.46	80.12	.553	.544	-11.460	14.152	10.915	39.155
11	.0227	.014	55.20	79.99	.560	.560	-11.266	14.346	11.029	42.120
12	.0249	.016	56.89	79.44	.577	.574	-10.827	14.785	11.509	53.609
13	.0359	.022	58.44	78.72	.593	.605	-10.425	15.187	12.136	66.580
14	.0430	.026	60.07	78.40	.609	.619	-10.002	15.610	12.420	79.737
15	.0489	.030	61.51	78.15	.624	.630	-9.628	15.984	12.636	90.670
16	.0560	.034	62.83	77.78	.638	.646	-9.282	16.329	12.657	103.826
17	.0630	.038	63.73	77.42	.647	.662	-9.050	16.562	13.271	116.798
18	.0669	.042	64.31	77.45	.653	.661	-8.899	16.713	13.247	127.731
19	.0759	.046	65.44	77.14	.664	.674	-8.605	17.007	13.519	140.702
20	.0830	.051	66.43	77.14	.674	.674	-8.399	17.263	13.514	153.858
21	.0889	.054	66.90	76.94	.679	.683	-8.227	17.385	13.695	164.791
22	.0961	.059	67.93	76.60	.689	.698	-7.958	17.654	13.987	178.133
23	.1030	.063	68.73	76.47	.697	.703	-7.751	17.860	14.098	190.919
24	.1089	.066	69.03	76.35	.704	.709	-7.574	17.938	14.208	201.852
25	.1159	.071	69.52	76.43	.705	.705	-7.546	18.066	14.136	214.824
26	.1230	.075	70.03	75.99	.711	.724	-7.413	18.199	14.519	227.980
27	.1400	.085	71.76	75.65	.728	.739	-6.962	18.650	14.820	259.482
28	.1578	.096	72.86	75.53	.739	.744	-6.677	18.935	14.925	292.466
29	.1751	.107	74.25	75.14	.753	.761	-6.316	19.296	15.261	324.524
30	.1929	.118	75.34	74.90	.764	.772	-6.033	19.579	15.470	357.508
31	.2101	.128	75.76	74.62	.769	.784	-5.923	19.689	15.711	389.381
32	.2280	.139	76.71	74.42	.778	.793	-5.676	19.936	15.893	422.550
33	.2449	.149	77.43	74.30	.786	.798	-5.491	20.121	15.997	453.867
34	.2630	.160	78.41	74.27	.796	.799	-5.236	20.346	16.022	487.407
35	.2799	.171	78.91	74.09	.801	.807	-5.104	20.508	16.178	518.723
36	.2981	.182	79.56	73.96	.808	.813	-4.930	20.682	16.293	552.449
37	.3497	.213	81.48	73.46	.827	.834	-4.437	21.175	16.730	648.066
38	.4009	.244	83.13	73.00	.844	.854	-4.008	21.604	17.127	742.942
39	.4531	.276	84.62	72.96	.859	.856	-3.622	21.990	17.163	839.671
40	.5049	.308	85.70	72.47	.870	.877	-3.340	22.272	17.592	935.659
41	.5569	.339	86.98	72.22	.883	.888	-3.006	22.605	17.804	1032.017
42	.6091	.371	88.39	72.04	.897	.896	-2.642	22.970	17.965	1128.746
43	.6607	.403	89.35	71.69	.907	.911	-2.392	23.220	18.272	1224.364
44	.7128	.434	89.94	71.74	.913	.909	-2.238	23.374	18.229	1320.907
45	.7639	.466	90.90	71.50	.922	.920	-1.989	23.623	18.436	1415.598
46	.8161	.497	91.26	71.25	.926	.930	-1.869	23.723	18.652	1512.327
47	.8680	.529	92.13	71.16	.935	.934	-1.669	23.943	18.735	1608.500
48	.9199	.561	92.94	70.92	.943	.945	-1.458	24.154	18.943	1704.673
49	.9721	.592	93.13	70.86	.945	.948	-1.411	24.201	18.998	1801.402
50	1.0238	.624	93.90	70.62	.953	.958	-1.209	24.403	19.206	1897.205
51	1.0749	.655	94.36	70.69	.958	.955	-1.086	24.526	19.140	1991.895
52	1.1269	.687	94.59	70.66	.960	.956	-1.031	24.581	19.167	2068.254
53	1.1790	.719	95.35	70.29	.967	.972	-8.834	24.778	19.487	2184.798
54	1.2310	.750	95.67	70.32	.971	.971	-7.50	24.862	19.461	2281.156
55	1.2831	.782	95.77	70.26	.972	.973	-7.25	24.887	19.513	2377.700
56	1.3350	.814	96.16	70.14	.976	.979	-6.621	24.991	19.620	2473.873
57	1.3868	.845	96.40	70.12	.978	.980	-5.559	25.053	19.640	2569.861
58	1.4379	.876	96.67	70.08	.981	.981	-4.90	25.122	19.674	2664.551
59	1.4901	.908	96.80	70.05	.982	.983	-4.57	25.155	19.704	2761.280
60	1.5420	.940	97.07	70.07	.985	.982	-3.85	25.227	19.684	2857.454
61	1.5939	.971	97.19	69.90	.986	.989	-3.55	25.257	19.830	2853.627
62	1.6461	1.003	97.26	69.96	.987	.986	-3.37	25.275	19.777	3050.356
63	1.6981	1.035	97.37	69.93	.988	.988	-3.08	25.304	19.806	3146.714
64	2.0261	1.235	98.02	69.79	.995	.994	-2.40	25.472	19.928	3754.514
65	2.3550	1.435	98.33	69.77	.998	.995	-0.59	25.553	19.948	4363.981
66	2.6830	1.635	98.54	69.64	1.000	1.000	-0.04	25.608	20.055	4971.780
67	3.0121	1.836	98.53	69.64	1.000	1.001	-0.06	25.606	20.060	5581.618
68	3.3408	2.036	98.59	69.67	1.000	1.000	-0.10	25.622	20.031	6190.714
69	3.6690	2.236	98.64	69.61	1.001	1.002	-0.21	25.633	20.085	6798.884
70	3.9979	2.437	98.54	69.65	1.000	1.000	-0.05	25.607	20.051	7408.351

Table 61.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 10. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y^+=35$
FREE STREAM VELOCITY =	99.281	99.281
FREE STREAM TEMPERATURE =	70.232	
WALL TEMPERATURE =	93.600	
WALL HEAT FLUX =	.07787	
FREE STREAM DENSITY =	.07604	
FREE STREAM KINEMATIC VISCOSITY =	.0001608	
DENSITY OF FLUID AT WALL =	.07282	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001736	
WALL/FREE STREAM DENSITY RATIO =	.95766	
LOCATION REYNOLDS NUMBER (REX) =	3915891.00	
INPUT VALUE OF VELOCITY DELTA =	2.10000	
INPUT VALUE OF TEMPERATURE DELTA =	2.40000	
CALCULATED DELTA =		1.56573
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.18436	.18442
MOMENTUM THICKNESS (THETA) =	.13896	.13917
ENERGY-DISSIPATION THICKNESS =	.25302	.25315
ENTHALPY THICKNESS =	.00584	.00584
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.32666	1.32514
SHAPE FACTOR 32 (ENERGY/THETA) =	1.82073	1.81905
MOMENTUM THICKNESS REYNOLDS NUMBER =	7146.80	7159.29
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	9484.03	9487.07
SKIN FRICTION COEFFICIENT =	.002944	
FRICTION VELOCITY =	3.89212	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.20729
CLAUSERS 'DELTA' INTEGRAL =	-4.40457	-4.55725
CLAUSERS 'G' INTEGRAL =	25.11143	25.00872
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.17564	.17866
MOMENTUM THICKNESS - CONSTANT DENSITY =	.14001	.14022
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.25447	1.27410
LOCATION -X- =	76.12000	
Z = -6 INCHES		

Table 62.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79
 RUN NO. 10. POINT 10. GRID NO. 3

REDUCED PROFILE DATA

N	INCHES	Y/ INCHES	U/ FT/SEC	T/ DEG.F	U/UE	THETA	UTAU	U-UE	U(+)	U(-)	T(+)	T(-)
1	.0059	.004	35.63	86.02	.359	.326	-16.353	.0.156	6.677	11.079		
2	.0073	.005	40.65	84.97	.409	.371	-15.064	10.444	7.590	13.694		
3	.0084	.005	43.80	84.34	.441	.398	-14.254	11.254	8.141	15.749		
4	.0104	.007	47.49	83.43	.478	.437	-13.307	12.201	8.938	19.486		
5	.0124	.008	49.97	82.60	.503	.472	-12.669	12.839	9.662	23.222		
6	.0143	.009	51.84	82.03	.522	.496	-12.188	13.320	10.160	26.772		
7	.0159	.010	53.04	81.69	.534	.511	-11.881	13.627	10.455	29.761		
8	.0172	.011	53.62	81.36	.540	.525	-11.731	13.777	10.747	32.189		
9	.0193	.012	54.86	80.98	.553	.541	-11.412	14.096	11.080	36.113		
10	.0212	.013	55.56	80.69	.560	.554	-11.234	14.274	11.330	39.662		
11	.0233	.015	56.14	80.52	.565	.561	-11.084	14.424	11.475	43.586		
12	.0250	.016	57.02	80.51	.574	.561	-10.859	14.649	11.487	46.762		
13	.0311	.020	58.75	79.63	.592	.599	-10.414	15.094	12.254	58.158		
14	.0304	.024	60.12	79.36	.606	.611	-10.061	15.447	12.495	71.796		
15	.0454	.029	61.45	78.84	.619	.632	-9.720	15.729	12.944	84.873		
16	.0513	.032	63.07	78.75	.636	.637	-9.304	16.204	13.027	95.896		
17	.0583	.037	64.18	78.28	.646	.657	-9.018	16.491	13.439	108.973		
18	.0652	.041	64.63	77.96	.653	.670	-8.852	16.656	13.711	121.864		
19	.0715	.045	65.80	77.73	.663	.680	-8.603	16.906	13.915	133.634		
20	.0761	.049	66.74	77.61	.672	.685	-8.360	17.148	14.022	145.964		
21	.0853	.054	67.37	77.50	.679	.690	-8.198	17.310	14.118	159.415		
22	.0913	.058	68.19	77.45	.687	.692	-8.068	17.520	14.163	170.625		
23	.0983	.062	68.87	77.21	.694	.702	-7.815	17.694	14.370	183.702		
24	.1055	.067	69.85	76.86	.704	.717	-7.562	17.946	14.672	197.153		
25	.1114	.070	70.02	76.85	.705	.718	-7.518	17.990	14.685	208.176		
26	.1184	.075	70.63	76.60	.711	.728	-7.362	18.146	14.907	221.253		
27	.1253	.079	71.32	76.45	.718	.735	-7.185	18.323	15.035	234.144		
28	.1423	.090	73.00	76.16	.735	.747	-6.753	18.755	15.283	265.904		
29	.1599	.101	74.04	75.79	.746	.763	-6.486	19.022	15.607	298.785		
30	.1774	.112	74.89	75.62	.754	.770	-6.268	19.240	15.763	331.479		
31	.1951	.123	76.10	75.50	.766	.775	-5.956	19.552	15.863	364.546		
32	.2123	.134	76.92	75.01	.775	.796	-5.745	19.763	16.295	396.679		
33	.2301	.145	77.82	74.99	.784	.797	-5.514	19.994	16.312	429.934		
34	.2473	.156	78.71	75.05	.793	.794	-5.285	20.223	16.258	462.067		
35	.2653	.167	79.30	74.51	.799	.817	-5.133	20.375	16.726	495.695		
36	.2824	.178	80.01	74.35	.806	.824	-4.951	20.557	16.871	527.642		
37	.3002	.189	80.78	74.35	.814	.824	-4.754	20.754	16.869	560.896		
38	.3519	.222	82.74	73.98	.833	.840	-4.251	21.257	17.190	557.483		
39	.4034	.254	83.93	73.43	.845	.863	-3.943	21.565	17.668	753.697		
40	.4553	.287	85.71	73.23	.863	.872	-3.486	22.022	17.848	850.657		
41	.5074	.320	86.78	72.93	.874	.885	-3.211	22.297	18.111	947.992		
42	.5595	.353	87.92	72.49	.886	.904	-2.920	22.588	18.492	1045.326		
43	.6114	.386	89.13	72.43	.898	.906	-2.609	22.899	18.548	1142.287		
44	.6629	.418	89.96	72.08	.906	.921	-2.395	23.113	18.852	1238.500		
45	.7149	.451	90.90	72.00	.916	.924	-2.154	23.354	18.918	1335.648		
46	.7664	.483	91.84	71.91	.925	.928	-1.912	23.596	18.999	1431.861		
47	.8183	.516	92.47	71.58	.931	.947	-1.751	23.757	19.376	1528.822		
48	.8703	.549	92.90	71.34	.936	.953	-1.640	23.869	19.496	1625.969		
49	.9223	.582	93.67	71.39	.943	.951	-1.442	24.066	19.454	1723.117		
50	.9743	.614	94.69	71.09	.954	.963	-1.179	24.329	19.714	1820.264		
51	1.0260	.647	94.72	71.10	.954	.963	-1.171	24.337	19.712	1916.851		
52	1.0774	.679	95.44	71.09	.961	.963	-1.056	24.522	19.713	2012.878		
53	1.1293	.712	95.79	70.98	.965	.968	-0.898	24.610	19.815	2109.838		
54	1.1814	.745	95.98	70.98	.967	.968	-0.848	24.660	19.815	2207.173		
55	1.2331	.778	96.48	70.93	.972	.970	-0.720	24.788	19.859	2303.760		
56	1.2854	.811	96.72	70.77	.974	.977	-0.659	24.850	19.995	2401.468		
57	1.3374	.843	97.03	70.78	.977	.976	-0.578	24.930	19.984	2498.615		
58	1.3890	.876	97.36	70.77	.981	.977	-0.492	25.016	19.993	2595.016		
59	1.4405	.908	97.49	70.55	.982	.986	-0.460	25.049	20.185	2691.229		
60	1.4922	.941	97.63	70.61	.983	.984	-0.424	25.084	20.135	2787.816		
61	1.5442	.974	97.95	70.63	.987	.983	-0.342	25.166	20.122	2884.964		
62	1.5961	1.007	98.03	70.57	.987	.986	-0.322	25.186	20.171	2981.924		
63	1.6483	1.039	98.22	70.54	.989	.987	-0.272	25.236	20.195	3079.445		
64	1.7003	1.072	98.45	70.53	.992	.987	-0.213	25.295	20.209	3176.593		
65	2.0285	1.279	98.81	70.38	.995	.994	-0.121	25.388	20.341	3789.743		
66	2.3575	1.487	99.23	70.35	1.000	1.000	-0.013	25.496	20.360	4404.388		
67	2.6853	1.693	99.23	70.22	1.000	1.000	-0.012	25.533	20.462	5016.791		
68	3.0142	1.901	99.36	70.21	1.001	1.000	-0.025	25.576	20.443	6245.520		
69	3.3430	2.108	99.15	70.26	1.000	1.000	-0.002	25.610	20.472	6858.857		
70	3.6713	2.315	99.29	70.22	1.000	1.000	-0.009	25.6499	20.428	7473.689		
71	4.0004	2.523	99.24	70.28	1.000	1.000	-0.009	25.681	20.428			

Table 62.

JOB KLD70 TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 24. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $y+=35$
FREE STREAM VELOCITY	= 99.510	99.510
FREE STREAM TEMPERATURE	= 69.100	
WALL TEMPERATURE	= 92.540	
WALL HEAT FLUX	= .07710	
FREE STREAM DENSITY	= .07488	
FREE STREAM KINEMATIC VISCOSITY	= .0001631	
DENSITY OF FLUID AT WALL	= .07170	
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001761	
WALL/FREE STREAM DENSITY RATIO	= .95755	
LOCATION REYNOLDS NUMBER (REX)	= 4282038.69	
INPUT VALUE OF VELOCITY DELTA	= 2.40000	
INPUT VALUE OF TEMPERATURE DELTA	= 2.40000	
CALCULATED DELTA		1.73979
DELTA 99.5% INPUT	= .00000	
DISPLACEMENT THICKNESS (DELSTAR)	= .19731	.19717
MOMENTUM THICKNESS (THETA)	= .14844	.14880
ENERGY-DISSIPATION THICKNESS	= .27040	.27073
ENTHALPY THICKNESS	= .00641	.00642
SHAPE FACTOR 12 (DELSTAR/THETA)	= 1.32928	1.32504
SHAPE FACTOR 32 (ENERGY/THETA)	= 1.82163	1.81936
MOMENTUM THICKNESS REYNOLDS NUMBER	= 7548.85	7567.53
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 10034.51	10027.26
SKIN FRICTION COEFFICIENT	= .002930	
FRICITION VELOCITY	= 3.89240	
LAW OF THE WALL CONSTANT (K)	= .41000	
LAW OF THE WALL CONSTANT (C)	= 5.00000	
WAKE STRENGTH		.17959
CLAUSERS 'DELTA' INTEGRAL	= -4.68044	-4.87665
CLAUSERS 'G' INTEGRAL	= 27.00375	26.65151
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .18699	.19075
MOMENTUM THICKNESS - CONSTANT DENSITY	= .14959	.14998
SHAPE FACTOR 12 - CONSTANT DENSITY	= 1.25003	1.27190
LOCATION -X-	84.20000	
Z = CENTERLINE		

Table 63.

JOB KLD7D TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 24. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/	U FT/SEC	T DEG.F	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0078	.005	41.87	83.78	.421	.374	-14.8C7	10.758	7.607	14.426
2	.0089	.005	43.50	83.16	.437	.400	-14.390	11.176	8.145	16.452
3	.0103	.006	45.80	82.53	.460	.427	-13.798	11.767	8.696	17.031
4	.0111	.006	47.35	82.29	.476	.437	-13.400	12.165	8.905	20.505
5	.0119	.007	48.60	82.12	.488	.444	-13.079	12.487	9.049	21.979
6	.0137	.008	50.57	81.31	.508	.479	-12.574	12.992	9.758	25.295
7	.0149	.009	51.55	81.06	.518	.490	-12.322	13.482	9.976	27.506
8	.0162	.009	52.48	80.90	.527	.497	-12.083	13.735	10.114	29.901
9	.0179	.010	53.46	80.64	.537	.508	-11.830	10.342	33.033	
10	.0199	.011	54.56	80.25	.548	.524	-11.547	14.018	10.677	36.718
11	.0218	.013	55.13	79.95	.554	.537	-11.403	14.162	10.934	40.218
12	.0237	.014	56.37	79.56	.566	.554	-11.083	14.482	11.278	43.719
13	.0253	.015	56.74	79.51	.570	.556	-10.988	14.577	11.321	46.667
14	.0273	.016	57.38	79.34	.577	.563	-10.824	14.741	11.466	50.351
15	.0295	.017	57.99	79.39	.583	.561	-10.666	14.899	11.420	54.405
16	.0311	.018	58.52	79.24	.588	.567	-10.530	15.036	11.550	57.352
17	.0327	.019	59.06	79.02	.594	.577	-10.392	15.173	11.748	60.300
18	.0368	.022	60.25	78.48	.605	.600	-10.087	15.278	12.213	71.538
19	.0460	.026	61.86	78.26	.622	.609	-9.667	15.898	12.405	84.803
20	.0531	.031	63.20	77.72	.635	.632	-9.329	16.237	12.878	97.684
21	.0593	.034	64.00	77.36	.643	.648	-9.123	16.442	13.189	109.306
22	.0659	.038	65.13	77.15	.654	.657	-8.834	16.732	13.369	121.466
23	.0729	.042	65.88	76.97	.662	.664	-8.639	16.926	13.529	134.362
24	.0789	.045	66.86	76.84	.672	.670	-8.368	17.177	13.643	145.416
25	.0860	.049	67.49	76.70	.678	.676	-8.227	17.378	13.764	156.497
26	.0929	.053	68.43	76.46	.688	.686	-7.986	17.579	13.972	171.209
27	.0993	.057	68.82	76.21	.692	.697	-7.886	17.680	14.190	183.000
28	.1060	.061	68.99	76.11	.693	.701	-7.842	17.723	14.272	195.344
29	.1131	.065	70.08	75.97	.704	.707	-7.560	18.005	14.391	208.425
30	.1191	.068	70.54	75.81	.709	.714	-7.444	18.122	14.536	219.479
31	.1259	.072	70.55	75.67	.709	.720	-7.441	18.124	14.655	232.007
32	.1329	.076	71.60	75.55	.720	.725	-7.170	18.396	14.759	244.903
33	.1405	.087	73.11	75.19	.735	.740	-6.783	18.782	15.074	277.329
34	.1477	.096	73.88	74.89	.742	.753	-6.586	18.980	15.335	309.017
35	.1548	.106	75.15	74.71	.755	.761	-6.259	19.306	15.492	340.521
36	.2031	.117	75.70	74.43	.761	.773	-6.117	19.448	15.736	374.236
37	.2200	.126	76.84	74.37	.772	.775	-5.825	19.740	15.785	375.372
38	.2382	.137	77.61	74.05	.782	.789	-5.576	19.989	16.064	438.902
39	.2548	.146	78.36	73.95	.787	.793	-5.434	20.131	16.153	469.485
40	.2729	.157	79.14	73.67	.795	.805	-5.232	20.333	16.396	502.832
41	.2901	.167	79.90	73.52	.803	.811	-5.038	20.527	16.521	534.520
42	.3083	.177	80.54	73.36	.809	.818	-4.874	20.692	16.658	568.051
43	.3597	.207	81.83	72.81	.822	.842	-4.543	21.022	17.143	662.748
44	.4109	.236	83.58	72.74	.840	.845	-4.091	21.474	17.201	757.076
45	.4628	.266	85.27	72.39	.857	.860	-3.658	21.907	17.502	852.694
46	.5149	.296	86.45	72.18	.869	.869	-3.354	22.211	17.686	948.680
47	.5669	.326	87.60	71.94	.880	.879	-3.061	22.505	17.896	1044.482
48	.6193	.356	88.45	71.48	.889	.898	-2.842	22.723	18.295	1141.021
49	.6707	.386	89.61	71.34	.900	.905	-2.544	23.021	18.418	1235.718
50	.7227	.415	90.62	71.39	.911	.902	-2.285	23.280	18.370	1331.520
51	.7741	.445	90.92	70.93	.914	.922	-2.028	23.357	18.772	1426.216
52	.8261	.475	92.06	70.79	.925	.928	-1.914	23.651	18.892	1522.019
53	.8780	.505	92.74	70.52	.932	.939	-1.740	23.825	19.130	1617.636
54	.9299	.535	93.16	70.41	.936	.944	-1.630	23.935	19.222	1713.254
55	.9819	.564	93.92	70.27	.944	.950	-1.437	24.129	19.350	1809.056
56	1.0337	.594	94.28	70.20	.947	.953	-1.343	24.222	19.408	1904.490
57	1.0851	.624	94.97	70.22	.954	.952	-1.166	24.400	19.387	1999.186
58	1.1369	.653	95.49	70.09	.960	.958	-1.032	24.533	19.504	2094.620
59	1.1888	.683	95.79	69.93	.963	.964	-9.56	24.610	19.630	2190.238
60	1.2412	.713	95.89	69.87	.964	.967	-9.29	24.636	19.697	2286.777
61	1.2928	.743	96.55	69.80	.970	.970	-7.60	24.806	19.753	2381.842
62	1.3449	.773	96.83	69.74	.973	.973	-6.88	24.877	19.806	2477.828
63	1.3967	.803	97.10	69.62	.976	.978	-6.19	24.946	19.908	2573.590
64	1.4479	.832	97.33	69.56	.978	.981	-5.59	25.006	19.967	2667.590
65	1.4999	.862	97.55	69.53	.980	.982	-5.03	25.062	19.99	2763.392
66	1.5521	.892	97.65	69.48	.981	.984	-4.78	25.088	20.029	2859.563
67	1.6041	.922	97.94	69.51	.984	.983	-4.03	25.162	20.011	2955.365
68	1.6559	.952	98.13	69.33	.986	.990	-3.54	25.211	20.167	3050.798
69	1.7080	.982	98.42	69.40	.989	.987	-2.79	25.286	20.202	3146.785
70	2.1409	1.231	99.20	69.19	.997	.996	-0.79	25.486	20.298	3944.337
71	2.5739	1.479	99.53	69.11	1.000	1.000	-0.06	25.571	20.355	4742.073
72	3.0080	1.729	99.49	69.08	1.000	1.001	-0.06	25.560	20.379	5541.836

Table 63.

JOB KLO74 TAPE 3166P- FILES 136-159, RUNS 9.01-9.22 74/17/79

RUN NO. 9. POTNT 3. GRID NO. 4

SECONDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y^+=35$
FREE STREAM VELOCITY	100.573	100.573
FREE STREAM TEMPERATURE	68.762	
WALL TEMPERATURE	84.755	
WALL HEAT FLUX	•E7838	
FREE STREAM DENSITY	•E7517	
FREE STREAM KINEMATIC VISCOSITY	•E001623	
DENSITY OF FLUID AT WALL	•E7297	
KINEMATIC VISCOSITY OF FLUID AT WALL	•E001711	
WALL/FREE STREAM DENSITY RATIO	•E7067	
LOCATION REYNOLDS NUMBER (REX)	627255.81	
INPUT VALUE OF VELOCITY DELTA	•E1800	
INPUT VALUE OF TEMPERATURE DELTA	•E1800	
CALCULATED DELTA		.28463
DELTA 29.52 INPUT	•E00000	
DISPLACEMENT THICKNESS (DELSTAR)	•E25552	•E3568
MOMENTUM THICKNESS (THETA)	•E25222	•E2543
ENERGY-DISSIPATION THICKNESS	•E4555	•E4560
ENTHALPY THICKNESS	•E00061	•E0081
SHAPE FACTOR 12 (DELSTAR/THETA)	1.41045	1.40323
SHAPE FACTOR 32 (ENERGY/THETA)	1.80514	1.79693
MOMENTUM THICKNESS REYNOLDS NUMBER	1.801.79	1.312.61
DISPLACEMENT THICKNESS REYNOLDS NUMBER	1.836.16	1.841.89
SKIN FRICTION COEFFICIENT	•E04383	
FRICITION VELOCITY	•E77892	
LAW OF THE WALL CONSTANT (K)	•E1000	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.04132
CLAUSERS "DELTA" INTEGRAL	-•E4742	•E73394
CLAUSERS "G" INTEGRAL	•E15755	•E11236
DISPLACEMENT THICKNESS - CONSTANT DENSITY	•E3262	•E3497
MOMENTUM THICKNESS - CONSTANT DENSITY	•E2537	•E2550
SHAPE FACTOR 12 - CONSTANT DENSITY	1.28464	1.3626F

LOCATION -X- 12.15700

Z = CENTERLINE

Table 64.

JCB KLD74 TAPE 31660- FILES 13P-159, RUNS 9.01-9.22 04/17/79

RUN NO. 9. POINT 3. GRID NO. 4

REDUCED PROFILE DATA

Y	U	T	U/UF	THETA	UTAU	U(+)	7401	Y(4)
1	15	42.4	.79.87	.422	.348 -12.174	8.672	6.261	16.677
2	15	45.8	.79.12	.415 -11.457	9.598	7.740	14.698	12.171
3	15	50.2	.77.79	.517	.461 -10.375	10.675	8.241	16.626
4	15	54.1	.76.82	.543	.496 -9.518	11.458	9.441	16.640
5	15	59.0	.76.27	.596	.521 -8.498	12.502	9.557	16.670
6	15	64.0	.75.79	.619	.552 -7.841	13.574	10.255	16.698
7	15	67.8	.76.57	.627	.575 -7.275	14.625	11.277	16.729
8	15	71.7	.75.12	.654	.603 -6.717	15.678	12.255	16.767
9	15	74.6	.74.98	.668	.631 -6.275	16.730	13.446	16.807
10	15	76.5	.74.55	.678	.659 -5.775	17.792	14.446	16.847
11	15	77.7	.74.19	.697	.682 -5.397	18.839	15.532	16.887
12	15	79.1	.74.19	.722	.713 -4.981	19.874	16.632	16.927
13	15	79.3	.73.51	.716	.745 -4.566	20.916	17.730	17.067
14	15	79.4	.73.51	.721	.774 -4.169	21.958	18.428	17.213
15	15	79.7	.72.2	.721	.802 -3.765	22.992	19.775	17.471
16	15	79.9	.72.2	.723	.831 -3.362	23.024	20.925	17.733
17	15	80.1	.72.2	.723	.860 -2.951	24.067	21.490	18.272
18	15	80.3	.72.2	.723	.889 -2.541	25.111	22.134	18.855
19	15	80.5	.72.2	.723	.918 -2.133	26.155	22.834	19.525
20	15	80.7	.72.2	.723	.947 -1.723	27.199	23.511	20.205
21	15	80.9	.72.2	.723	.976 -1.313	28.243	24.196	20.855
22	15	81.1	.72.2	.723	.100 -1.001	29.287	24.851	21.511
23	15	81.3	.72.2	.723	.129 -0.690	30.331	25.511	22.205
24	15	81.5	.72.2	.723	.158 -0.389	31.375	26.196	22.888
25	15	81.7	.72.2	.723	.187 -0.088	32.419	26.877	23.588
26	15	81.9	.72.2	.723	.216 -0.377	33.463	27.557	24.267
27	15	82.1	.72.2	.723	.245 -0.066	34.507	28.231	24.946
28	15	82.3	.72.2	.723	.274 -0.356	35.551	28.919	25.625
29	15	82.5	.72.2	.723	.303 -0.055	36.595	29.598	26.305
30	15	82.7	.72.2	.723	.332 -0.345	37.639	30.281	27.005
31	15	82.9	.72.2	.723	.361 -0.044	38.683	30.957	27.705
32	15	83.1	.72.2	.723	.390 -0.334	39.727	31.636	28.395
33	15	83.3	.72.2	.723	.419 -0.033	40.771	32.314	29.085
34	15	83.5	.72.2	.723	.448 -0.323	41.815	33.005	29.785
35	15	83.7	.72.2	.723	.477 -0.022	42.859	33.685	30.475
36	15	83.9	.72.2	.723	.506 -0.312	43.903	34.371	31.165
37	15	84.1	.72.2	.723	.535 -0.011	44.947	35.051	31.855
38	15	84.3	.72.2	.723	.564 -0.301	45.991	35.731	32.545
39	15	84.5	.72.2	.723	.593 -0.001	46.035	36.419	33.235
40	15	84.7	.72.2	.723	.622 -0.291	47.079	37.098	33.925
41	15	84.9	.72.2	.723	.651 -0.090	48.123	37.788	34.615
42	15	85.1	.72.2	.723	.680 -0.280	49.167	38.477	35.305
43	15	85.3	.72.2	.723	.709 -0.080	50.211	39.166	36.005
44	15	85.5	.72.2	.723	.738 -0.270	51.255	39.855	36.705
45	15	85.7	.72.2	.723	.767 -0.070	52.300	40.544	37.405
46	15	85.9	.72.2	.723	.796 -0.260	53.344	41.234	38.105
47	15	86.1	.72.2	.723	.825 -0.060	54.388	41.923	38.805
48	15	86.3	.72.2	.723	.854 -0.250	55.432	42.612	39.495
49	15	86.5	.72.2	.723	.883 -0.050	56.476	43.301	40.195
50	15	86.7	.72.2	.723	.912 -0.240	57.520	44.000	40.895
51	15	86.9	.72.2	.723	.941 -0.040	58.564	44.689	41.595
52	15	87.1	.72.2	.723	.970 -0.230	59.608	45.378	42.295
53	15	87.3	.72.2	.723	.100 -0.030	60.652	46.067	42.995
54	15	87.5	.72.2	.723	.129 -0.220	61.696	46.756	43.695
55	15	87.7	.72.2	.723	.158 -0.020	62.740	47.445	44.395
56	15	87.9	.72.2	.723	.187 -0.210	63.784	48.134	45.095
57	15	88.1	.72.2	.723	.216 -0.010	64.828	48.823	45.795
58	15	88.3	.72.2	.723	.245 -0.200	65.872	49.512	46.495
59	15	88.5	.72.2	.723	.274 -0.000	66.916	50.191	47.195
60	15	88.7	.72.2	.723	.303 -0.190	67.960	50.880	47.895
61	15	88.9	.72.2	.723	.332 -0.090	68.994	51.569	48.595
62	15	89.1	.72.2	.723	.361 -0.180	69.999	52.258	49.295
63	15	89.3	.72.2	.723	.390 -0.080	70.993	52.947	49.995
64	15	89.5	.72.2	.723	.419 -0.170	71.997	53.636	50.695
65	15	89.7	.72.2	.723	.448 -0.070	72.991	54.325	51.395
66	15	89.9	.72.2	.723	.477 -0.160	73.995	55.014	52.095
67	15	90.1	.72.2	.723	.506 -0.060	74.999	55.693	52.795
68	15	90.3	.72.2	.723	.535 -0.150	75.993	56.382	53.495
69	15	90.5	.72.2	.723	.564 -0.050	76.997	57.071	54.195
70	15	90.7	.72.2	.723	.593 -0.140	77.991	57.760	54.895
71	15	90.9	.72.2	.723	.622 -0.040	78.995	58.449	55.595
72	15	91.1	.72.2	.723	.651 -0.130	79.999	59.138	56.295
73	15	91.3	.72.2	.723	.680 -0.030	80.993	59.827	56.995
74	15	91.5	.72.2	.723	.709 -0.120	81.997	60.516	57.695
75	15	91.7	.72.2	.723	.738 -0.020	82.991	61.205	58.395
76	15	91.9	.72.2	.723	.767 -0.110	83.995	61.894	59.095
77	15	92.1	.72.2	.723	.796 -0.010	84.999	62.583	59.795
78	15	92.3	.72.2	.723	.825 -0.100	85.993	63.272	60.495
79	15	92.5	.72.2	.723	.854 -0.000	86.997	63.961	61.195
80	15	92.7	.72.2	.723	.883 -0.090	87.991	64.650	61.895
81	15	92.9	.72.2	.723	.912 -0.080	88.995	65.339	62.595
82	15	93.1	.72.2	.723	.941 -0.070	89.999	66.028	63.295
83	15	93.3	.72.2	.723	.970 -0.060	90.993	66.717	63.995
84	15	93.5	.72.2	.723	.100 -0.050	91.997	67.406	64.695
85	15	93.7	.72.2	.723	.129 -0.040	92.991	68.095	65.395
86	15	93.9	.72.2	.723	.158 -0.030	93.995	68.784	66.095
87	15	94.1	.72.2	.723	.187 -0.020	94.999	69.473	66.795
88	15	94.3	.72.2	.723	.216 -0.010	95.993	70.162	67.495
89	15	94.5	.72.2	.723	.245 -0.000	96.997	70.851	68.195
90	15	94.7	.72.2	.723	.274 -0.090	97.991	71.540	68.895
91	15	94.9	.72.2	.723	.303 -0.080	98.995	72.229	69.595
92	15	95.1	.72.2	.723	.332 -0.070	99.999	72.918	70.295
93	15	95.3	.72.2	.723	.361 -0.060	100.993	73.607	70.995
94	15	95.5	.72.2	.723	.390 -0.050	101.997	74.296	71.695
95	15	95.7	.72.2	.723	.419 -0.040	102.991	74.985	72.395
96	15	95.9	.72.2	.723	.448 -0.030	103.995	75.674	73.095
97	15	96.1	.72.2	.723	.477 -0.020	104.999	76.363	73.795
98	15	96.3	.72.2	.723	.506 -0.010	105.993	77.052	74.495
99	15	96.5	.72.2	.723	.535 -0.000	106.997	77.741	75.195
100	15	96.7	.72.2	.723	.564 -0.090	107.991	78.430	75.895
101	15	96.9	.72.2	.723	.593 -0.080	108.995	79.119	76.595
102	15	97.1	.72.2	.723	.622 -0.070	109.999	79.808	77.295
103	15	97.3	.72.2	.723	.651 -0.060	110.993	80.497	77.995
104	15	97.5	.72.2	.723	.680 -0.050	111.997	81.186	78.695
105	15	97.7	.72.2	.723	.709 -0.040	112.991	81.875	79.395
106	15	97.9	.72.2	.723	.738 -0.030	113.995	82.564	80.095
107	15	98.1	.72.2	.723	.767 -0.020	114.999	83.253	80.795
108	15	98.3	.72.2	.723	.796 -0.010	115.993	83.942	81.495
109	15	98.5	.72.2	.723	.825 -0.000	116.997	84.631	82.195
110	15	98.7	.72.2	.723	.854 -0.090	117.991	85.320	82.895
111	15	98.9	.72.2	.723	.883 -0.080	118.995	86.009	83.595
112	15	99.1	.72.2	.723	.912 -0.070	119.999	86.698	84.295
113	15	99.3	.72.2	.723	.941 -0.060	120.993	87.387	84.995
114	15	99.5	.72.2	.723	.970 -0.050	121.997	88.076	85.695
115	15	99.7	.72.2	.723	.100 -0.040	122.991	88.765	86.395
116	15	99.9	.72.2	.723	.129 -0.030	123.995	89.454	87.095
117	15	100.1	.72.2	.723	.158 -0.020	124.999	90.143	87.795
118	15	100.3	.72.2	.72				

JOE KLD74 TAPE 31569- FILES 138-159, RUNS 9.01-9.02 04/17/79

RUN NO. 9. POINT 4. GRID NO. 4

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUELAVER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY	100.698	100.698
FREE STREAM TEMPERATURE	69.045	
WALL TEMPERATURE	84.097	
WALL HEAT FLUX	.07825	
FREE STREAM DENSITY	.07517	
KINEMATIC VISCOSITY	.0001625	
DENSITY OF FLUID AT WALL	.07293	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0701713	
WALL/FREE STREAM DENSITY RATIO	.07773	
LOCATION REYNOLDS NUMBER (REX)	627481.50	
INPUT VALUE OF VELOCITY DELTA	.44750	
INPUT VALUE OF TEMPERATURE DELTA	.46700	
CALCULATED DELTA		.72279
DISPLACEMENT THICKNESS (DELSTAR) INPUT	.00000	
MOMENTUM THICKNESS (THETA)	.04019	.04023
ENERGY-DISSIPIATION THICKNESS	.02875	.02896
ENTHALPY THICKNESS	.05197	.05215
SHAPE FACTOR 12 (DELSTAR/THETA)	1.39791	1.78934
SHAPE FACTOR 12 (ENERGY/THETA)	1.80781	1.79997
MOMENTUM THICKNESS REYNOLDS NUMBER	1484.53	1496.62
DISPLACEMENT THICKNESS REYNOLDS NUMBER	2775.25	2377.82
SKIN FRICTION COEFFICIENT	.004243	
FRICITION VELOCITY	4.70763	
LAW OF THE WALL CONSTANT (K)	.41052	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.05775
CLAUSER'S "DELTA" INTEGRAL	-.73843	-.84273
CLAUSER'S "C" INTEGRAL	4.77699	4.68772
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.03694	.03942
MOMENTUM THICKNESS - CONSTANT DENSITY	.02891	.02915
SHAPE FACTOR 12 - CONSTANT DENSITY	1.27759	1.35144

LOCATION -X- 12.15000

Z = .6 INCHES

Table 65.

JOE KLO74 TAPE 3166R- FILES 1T6-159, RUNS 9.21-9.22 04/17/79

RUN NO. 9. POINT 4. GRID NO. 4

REDUCED PROFILE DATA

Y/ INCHES	U/ FT/SEC	T/ SEC	U/U _E	U-U _E	U-U _{AU}	U-U _{I+J}	U-U _B	U-U _C	U-U _D	U-U _E
124	45.57	78.64	0.447	-0.708	-11.839	9.522	6.684	11.764	14.507	11.764
125	49.53	77.73	0.403	-0.855	-10.626	10.908	7.641	14.507	16.108	14.507
126	51.77	77.36	0.514	-0.785	-10.362	11.606	8.641	16.394	18.394	16.394
127	52.71	76.89	0.546	-0.878	-9.774	12.124	8.528	18.227	20.227	18.227
128	57.15	76.92	0.671	-0.804	-8.471	12.989	9.844	18.79	24.579	18.79
129	62.93	75.54	0.624	-0.868	-7.819	13.571	10.473	20.848	28.848	20.848
130	63.77	75.26	0.634	-0.808	-7.462	13.979	10.736	22.666	29.666	22.666
131	64.70	75.01	0.663	-0.727	-7.051	14.802	11.243	24.886	34.886	24.886
132	67.70	74.91	0.673	-0.679	-6.673	14.770	11.479	25.922	35.922	25.922
133	68.74	74.85	0.681	-0.679	-6.679	14.666	11.537	26.817	35.817	26.817
134	69.77	74.79	0.694	-0.679	-6.679	14.557	11.637	27.956	35.956	27.956
135	70.77	74.73	0.693	-0.679	-6.679	14.457	11.737	28.815	34.815	28.815
136	71.74	74.73	0.711	-0.713	-7.113	14.357	11.837	29.686	34.686	29.686
137	72.74	74.73	0.724	-0.713	-7.24	14.257	11.937	30.555	35.555	30.555
138	73.74	74.73	0.734	-0.713	-7.34	14.157	12.037	31.424	36.424	31.424
139	74.74	74.73	0.747	-0.713	-7.47	14.057	12.137	32.293	37.293	32.293
140	75.74	74.73	0.757	-0.713	-7.57	13.957	12.237	33.162	38.162	33.162
141	76.74	74.73	0.767	-0.713	-7.67	13.857	12.337	34.031	39.031	34.031
142	77.74	74.73	0.777	-0.713	-7.77	13.757	12.437	34.900	39.900	34.900
143	78.74	74.73	0.787	-0.713	-7.87	13.657	12.537	35.769	39.769	35.769
144	79.74	74.73	0.797	-0.713	-7.97	13.557	12.637	36.638	39.638	36.638
145	80.74	74.73	0.807	-0.713	-8.07	13.457	12.737	37.507	39.507	37.507
146	81.74	74.73	0.817	-0.713	-8.17	13.357	12.837	38.376	39.376	38.376
147	82.74	74.73	0.827	-0.713	-8.27	13.257	12.937	39.245	39.245	39.245
148	83.74	74.73	0.837	-0.713	-8.37	13.157	13.037	39.114	39.114	39.114
149	84.74	74.73	0.847	-0.713	-8.47	13.057	13.137	39.983	39.983	39.983
150	85.74	74.73	0.857	-0.713	-8.57	12.957	13.237	40.852	39.852	39.852
151	86.74	74.73	0.867	-0.713	-8.67	12.857	13.337	41.721	39.721	39.721
152	87.74	74.73	0.877	-0.713	-8.77	12.757	13.437	42.589	39.589	39.589
153	88.74	74.73	0.887	-0.713	-8.87	12.657	13.537	43.458	39.458	39.458
154	89.74	74.73	0.897	-0.713	-8.97	12.557	13.637	44.326	39.326	39.326
155	90.74	74.73	0.907	-0.713	-9.07	12.457	13.737	45.195	39.195	39.195
156	91.74	74.73	0.917	-0.713	-9.17	12.357	13.837	46.064	39.064	39.064
157	92.74	74.73	0.927	-0.713	-9.27	12.257	13.937	46.933	39.933	39.933
158	93.74	74.73	0.937	-0.713	-9.37	12.157	14.037	47.802	39.802	39.802
159	94.74	74.73	0.947	-0.713	-9.47	12.057	14.137	48.671	39.671	39.671
160	95.74	74.73	0.957	-0.713	-9.57	11.957	14.237	49.540	39.540	39.540
161	96.74	74.73	0.967	-0.713	-9.67	11.857	14.337	50.409	39.409	39.409
162	97.74	74.73	0.977	-0.713	-9.77	11.757	14.437	51.278	39.278	39.278
163	98.74	74.73	0.987	-0.713	-9.87	11.657	14.537	52.147	39.147	39.147
164	99.74	74.73	0.997	-0.713	-9.97	11.557	14.637	53.016	39.016	39.016
165	100.74	74.73	1.007	-0.713	-10.07	11.457	14.737	53.885	39.885	39.885
166	101.74	74.73	1.017	-0.713	-10.17	11.357	14.837	54.754	39.754	39.754
167	102.74	74.73	1.027	-0.713	-10.27	11.257	14.937	55.623	39.623	39.623
168	103.74	74.73	1.037	-0.713	-10.37	11.157	15.037	56.492	39.492	39.492
169	104.74	74.73	1.047	-0.713	-10.47	11.057	15.137	57.361	39.361	39.361
170	105.74	74.73	1.057	-0.713	-10.57	10.957	15.237	58.230	39.230	39.230
171	106.74	74.73	1.067	-0.713	-10.67	10.857	15.337	59.109	39.109	39.109
172	107.74	74.73	1.077	-0.713	-10.77	10.757	15.437	59.978	39.978	39.978
173	108.74	74.73	1.087	-0.713	-10.87	10.657	15.537	60.847	39.847	39.847
174	109.74	74.73	1.097	-0.713	-10.97	10.557	15.637	61.716	39.716	39.716
175	110.74	74.73	1.107	-0.713	-11.07	10.457	15.737	62.585	39.585	39.585
176	111.74	74.73	1.117	-0.713	-11.17	10.357	15.837	63.454	39.454	39.454
177	112.74	74.73	1.127	-0.713	-11.27	10.257	15.937	64.323	39.323	39.323
178	113.74	74.73	1.137	-0.713	-11.37	10.157	16.037	65.192	39.192	39.192
179	114.74	74.73	1.147	-0.713	-11.47	10.057	16.137	66.061	39.061	39.061
180	115.74	74.73	1.157	-0.713	-11.57	9.957	16.237	66.930	39.930	39.930
181	116.74	74.73	1.167	-0.713	-11.67	9.857	16.337	67.809	40.809	40.809
182	117.74	74.73	1.177	-0.713	-11.77	9.757	16.437	68.678	41.678	41.678
183	118.74	74.73	1.187	-0.713	-11.87	9.657	16.537	69.547	42.547	42.547
184	119.74	74.73	1.197	-0.713	-11.97	9.557	16.637	70.416	43.416	43.416
185	120.74	74.73	1.207	-0.713	-12.07	9.457	16.737	71.285	44.285	44.285
186	121.74	74.73	1.217	-0.713	-12.17	9.357	16.837	72.154	45.154	45.154
187	122.74	74.73	1.227	-0.713	-12.27	9.257	16.937	73.023	46.023	46.023
188	123.74	74.73	1.237	-0.713	-12.37	9.157	17.037	73.892	46.892	46.892
189	124.74	74.73	1.247	-0.713	-12.47	9.057	17.137	74.761	47.761	47.761
190	125.74	74.73	1.257	-0.713	-12.57	8.957	17.237	75.630	48.630	48.630
191	126.74	74.73	1.267	-0.713	-12.67	8.857	17.337	76.499	49.499	49.499
192	127.74	74.73	1.277	-0.713	-12.77	8.757	17.437	77.368	50.368	50.368
193	128.74	74.73	1.287	-0.713	-12.87	8.657	17.537	78.237	51.237	51.237
194	129.74	74.73	1.297	-0.713	-12.97	8.557	17.637	79.106	52.106	52.106
195	130.74	74.73	1.307	-0.713	-13.07	8.457	17.737	79.975	53.075	53.075
196	131.74	74.73	1.317	-0.713	-13.17	8.357	17.837	80.844	53.944	53.944
197	132.74	74.73	1.327	-0.713	-13.27	8.257	17.937	81.713	54.813	54.813
198	133.74	74.73	1.337	-0.713	-13.37	8.157	18.037	82.582	55.782	55.782
199	134.74	74.73	1.347	-0.713	-13.47	8.057	18.137	83.451	56.651	56.651
200	135.74	74.73	1.357	-0.713	-13.57	7.957	18.237	84.320	57.520	57.520
201	136.74	74.73	1.367	-0.713	-13.67	7.857	18.337	85.189	58.489	58.489
202	137.74	74.73	1.377	-0.713	-13.77	7.757	18.437	86.058	59.358	59.358
203	138.74	74.73	1.387	-0.713	-13.87	7.657	18.537	86.927	59.227	59.227
204	139.74	74.73	1.397	-0.713	-13.97	7.557	18.637	87.796	59.106	59.106
205	140.74	74.73	1.407	-0.713	-14.07	7.457	18.737	88.665	59.005	59.005
206	141.74	74.73	1.417	-0.713	-14.17	7.357	18.837	89.534	58.904	58.904
207	142.74	74.73	1.427	-0.713	-14.27	7.257	18.937	90.403	58.803	58.803
208	143.74	74.73	1.437	-0.713	-14.37	7.157	19.037	91.272	58.702	58.702
209	144.74	74.73	1.447	-0.713	-14.47	7.057	19.137	92.141	58.601	58.601
210	145.74	74.73	1.457	-0.713	-14.57	6.957	19.237	92.999	58.500	58.500
211	146.74	74.73	1.467	-0.713	-14.67	6.857	19.337	93.868	58.400	58.400
212	147.74	74.73	1.477	-0.713	-14.77	6.757	19.437	94.737	58.300	58.300
213	148.74	74.73	1.487	-0.713	-14.87	6.657	19.537	95.606	58.200	58.200
214	149.74	74.73	1.497	-0.713	-14.97	6.557	19.637	96.475	58.100	58.100
215	150									

JOB KLD74 TAPE 3166R- FILES 138-159, RUNS 9.01-9.22 04/17/79

RUN NO. 9. POINT 5. GRID NO. 4

SECONDARY LAYER PROPERTIES

STANDARD
INTERPOLATION
TO WALL
SUBLAYERED
FUNCTION FROM
WALL TO Y+3E

FREE STREAM VELOCITY	100.844	100.844
FREE STREAM TEMPERATURE	69.165	
WALL TEMPERATURE	55.497	
WALL HEAT FLUX	.07933	
FREE STREAM DENSITY	.007513	
FREE STREAM KINEMATIC VISCOSITY	.001625	
DENSITY OF FLUID AT WALL	.007267	
KINEMATIC VISCOSITY OF FLUID AT WALL	.001715	
WALL/FREE STREAM DENSITY RATIO	.96095	
LOCATION REYNOLDS NUMBER (REX)	628263.06	
INPUT VALUE OF VELOCITY DELTA	.430000	
INPUT VALUE OF TEMPERATURE DELTA	.460000	
CALCULATED DELTA	.31379	
DISPLACEMENT THICKNESS (DELSTAR)	.000000	
MOMENTUM THICKNESS (THETA)	.03898	.03897
ENERGY-DISSISSION THICKNESS	.02762	.02794
ENTHALPY THICKNESS	.04995	.05024
SHAPE FACTOR 12 (DELSTAR/THETA)	.00286	.00287
SHAPE FACTOR 32 (ENERGY/THETA)	1.41154	1.39515
MOMENTUM THICKNESS REYNOLDS NUMBER	1.80851	1.79834
DISPLACEMENT THICKNESS REYNOLDS NUMBER	1429.05	1484.52
SKIN FRICTION COEFFICIENT	2015.76	2015.32
FRICITION VELOCITY	.04282	
LAW OF THE WALL CONSTANT (K)	.47383	
LAW OF THE WALL CONSTANT (C)	.41007	
WAKE STRENGTH	5.06000	.04696
CLAUSER'S "DELTA" INTEGRAL	-.69372	-.81112
CLAUSER'S "G" INTEGRAL	4.68346	4.52875
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.03536	.03811
MOMENTUM THICKNESS - CONSTANT DENSITY	.02775	.02911
SHAPE FACTOR 12 - CONSTANT DENSITY	1.27259	1.35562

LOCATION -X- 12.15737

Z = -6 INCHES

Table 66.

JCE KLD74 TAPE 3166R- FILES 136-159, PUNS 9.01-9.22 04/10/79

RUN NO. 0. POINT S. GRID NO. 4

REDUCED PROFILE DATA

Table 66.

JCE KLD74 TAPE 3166R- FILES 138-159, RUNS 9.71-9.72 04/17/79

RUN NO. 9. POTNT 6. GRID NO. 4

BOUNDARY LAYER PROPERTIES

	LINPAP INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+ = 75
FREE STREAM VELOCITY =	100.355	100.355
FREE STREAM TEMPERATURE =	68.077	
WALL TEMPERATURE =	86.132	
WALL HEAT FLUX =	0.7877	
FREE STREAM DENSITY =	0.7516	
KINEMATIC VISCOSITY OF FLUID AT WALL =	0.001524	
KINEMATIC VISCOSITY OF FLUID AT WALL =	0.7276	
WALL/FREE STREAM DENSITY RATIO =	0.001719	
LOCATION REYNOLDS NUMBER (REX) =	0.96822	
INPUT VALUE OF VELOCITY DELTA =	1035617.92	
INPUT VALUE OF TEMPERATURE DELTA =	0.62700	
CALCULATED DELTA =		0.44668
DISPLACEMENT THICKNESS (DELSTAR) =	0.22017	
MOMENTUM THICKNESS (THETA) =	0.0514	0.75E11
ENERGY-DISSIPATION THICKNESS =	0.3967	0.39993
ENTHALPY THICKNESS =	0.07169	0.7193
SHAPE FACTOR 12 (DELSTAR/THETA) =	0.00142	0.00142
SHAPE FACTOR 72 (ENFFGY/THETA) =	1.35999	1.78012
MOMENTUM THICKNESS REYNOLDS NUMBER =	1.20745	1.80133
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	2.04271	2.056071
SKIN FRICTION COEFFICIENT =	2.63934	2.83706
FRICTION VELOCITY =	0.07904	
LAW OF THE WALL CONSTANT (K) =	4.50576	
LAW OF THE WALL CONSTANT (C) =	4.17700	
WAKE STRENGTH =	0.00000	0.99937
CLAUSERS "DELTA" INTEGRAL =	-1.07564	-1.19E86
CLAUSERS "C" INTEGRAL =	6.84279	6.69158
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	0.05101	0.5760
MOMENTUM THICKNESS - CONSTANT DENSITY =	0.03993	0.4222
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.27746	1.73557

LOCATION -X- 20.11000

Z = CENTERLINE

Table 67.

JOE KLOTH TAPE 3166F - FILES 176-159, RUNS 9.01-9.72 04/10/79

RUN NO. 9. POINT 6. GRID NO. 4

REDUCED PROFILE DATA

Y/	U	V	U/U'	THETA	UTAU	U-U'	T(+)	Y(+)
51	0.714	0.740	0.704	0.705	-12.574	9.699	6.663	11.961
52	0.714	0.740	0.704	0.695	-11.857	10.416	7.374	14.246
53	0.714	0.740	0.704	0.685	-10.670	11.273	8.351	17.541
54	0.714	0.740	0.704	0.675	-9.571	12.040	8.854	20.599
55	0.714	0.740	0.704	0.665	-8.672	12.878	9.367	23.701
56	0.714	0.740	0.704	0.655	-7.873	13.648	9.971	26.033
57	0.714	0.740	0.704	0.645	-7.174	14.426	10.132	31.066
58	0.714	0.740	0.704	0.635	-6.527	15.206	10.712	35.452
59	0.714	0.740	0.704	0.625	-6.026	15.946	11.325	39.653
60	0.714	0.740	0.704	0.615	-5.625	16.726	12.020	42.775
61	0.714	0.740	0.704	0.605	-5.224	17.506	12.713	46.774
62	0.714	0.740	0.704	0.595	-4.823	18.285	13.401	50.961
63	0.714	0.740	0.704	0.585	-4.422	19.064	14.191	55.737
64	0.714	0.740	0.704	0.575	-4.021	19.843	14.975	59.744
65	0.714	0.740	0.704	0.565	-3.620	20.622	15.757	63.724
66	0.714	0.740	0.704	0.555	-3.219	21.401	16.537	68.714
67	0.714	0.740	0.704	0.545	-2.818	22.179	17.313	73.605
68	0.714	0.740	0.704	0.535	-2.417	22.958	18.091	78.493
69	0.714	0.740	0.704	0.525	-2.016	23.737	18.879	83.555
70	0.714	0.740	0.704	0.515	-1.615	24.516	19.657	88.709
71	0.714	0.740	0.704	0.505	-1.214	25.295	20.435	93.799
72	0.714	0.740	0.704	0.495	-0.813	26.074	21.213	98.880
73	0.714	0.740	0.704	0.485	-0.412	26.853	21.991	103.968
74	0.714	0.740	0.704	0.475	0.011	27.632	22.769	108.946
75	0.714	0.740	0.704	0.465	0.410	28.411	23.557	113.934
76	0.714	0.740	0.704	0.455	0.809	29.190	24.345	118.922
77	0.714	0.740	0.704	0.445	1.198	29.969	25.133	123.890
78	0.714	0.740	0.704	0.435	1.587	30.748	25.921	128.878
79	0.714	0.740	0.704	0.425	1.976	31.527	26.709	133.856
80	0.714	0.740	0.704	0.415	2.365	32.306	27.497	138.834
81	0.714	0.740	0.704	0.405	2.754	33.085	28.285	143.812
82	0.714	0.740	0.704	0.395	3.143	33.864	29.073	148.790
83	0.714	0.740	0.704	0.385	3.532	34.643	29.861	153.768
84	0.714	0.740	0.704	0.375	3.921	35.422	30.649	158.746
85	0.714	0.740	0.704	0.365	4.310	36.199	31.437	163.724
86	0.714	0.740	0.704	0.355	4.699	36.978	32.225	168.702
87	0.714	0.740	0.704	0.345	5.088	37.757	33.013	173.679
88	0.714	0.740	0.704	0.335	5.477	38.536	33.791	178.657
89	0.714	0.740	0.704	0.325	5.866	39.315	34.579	183.635
90	0.714	0.740	0.704	0.315	6.255	40.094	35.367	188.613
91	0.714	0.740	0.704	0.305	6.644	40.873	36.151	193.591
92	0.714	0.740	0.704	0.295	7.033	41.652	36.939	198.569
93	0.714	0.740	0.704	0.285	7.422	42.431	37.727	203.547
94	0.714	0.740	0.704	0.275	7.811	43.210	38.515	208.525
95	0.714	0.740	0.704	0.265	8.199	43.989	39.293	213.493
96	0.714	0.740	0.704	0.255	8.588	44.768	39.981	218.471
97	0.714	0.740	0.704	0.245	8.977	45.547	40.769	223.449
98	0.714	0.740	0.704	0.235	9.366	46.326	41.557	228.427
99	0.714	0.740	0.704	0.225	9.755	47.095	42.345	233.405
100	0.714	0.740	0.704	0.215	10.144	47.874	43.133	238.383
101	0.714	0.740	0.704	0.205	10.533	48.653	43.921	243.361
102	0.714	0.740	0.704	0.195	10.922	49.432	44.709	248.339
103	0.714	0.740	0.704	0.185	11.311	50.211	45.497	253.317
104	0.714	0.740	0.704	0.175	11.699	50.990	46.285	258.295
105	0.714	0.740	0.704	0.165	12.088	51.769	47.073	263.273
106	0.714	0.740	0.704	0.155	12.477	52.548	47.861	268.251
107	0.714	0.740	0.704	0.145	12.866	53.327	48.649	273.229
108	0.714	0.740	0.704	0.135	13.255	54.106	49.437	278.207
109	0.714	0.740	0.704	0.125	13.644	54.885	50.225	283.185
110	0.714	0.740	0.704	0.115	14.033	55.664	51.013	288.163
111	0.714	0.740	0.704	0.105	14.422	56.443	51.791	293.141
112	0.714	0.740	0.704	0.095	14.811	57.222	52.579	298.119
113	0.714	0.740	0.704	0.085	15.199	57.999	53.367	303.096
114	0.714	0.740	0.704	0.075	15.588	58.777	54.155	308.074
115	0.714	0.740	0.704	0.065	15.977	59.555	54.943	313.052
116	0.714	0.740	0.704	0.055	16.366	60.333	55.731	318.030
117	0.714	0.740	0.704	0.045	16.755	61.112	56.519	323.008
118	0.714	0.740	0.704	0.035	17.144	61.890	57.307	328.086
119	0.714	0.740	0.704	0.025	17.533	62.669	58.095	333.064
120	0.714	0.740	0.704	0.015	17.922	63.447	58.883	338.042
121	0.714	0.740	0.704	0.005	18.311	64.226	59.671	343.020
122	0.714	0.740	0.704	-0.005	18.699	65.004	60.459	348.008
123	0.714	0.740	0.704	-0.015	19.088	65.783	61.247	353.086
124	0.714	0.740	0.704	-0.025	19.477	66.561	62.035	358.064
125	0.714	0.740	0.704	-0.035	19.866	67.339	62.823	363.042
126	0.714	0.740	0.704	-0.045	20.255	68.118	63.611	368.020
127	0.714	0.740	0.704	-0.055	20.644	68.896	64.399	373.008
128	0.714	0.740	0.704	-0.065	21.033	69.675	65.187	378.086
129	0.714	0.740	0.704	-0.075	21.422	70.453	65.975	383.064
130	0.714	0.740	0.704	-0.085	21.811	71.232	66.763	388.042
131	0.714	0.740	0.704	-0.095	22.199	71.999	67.551	393.020
132	0.714	0.740	0.704	-0.105	22.588	72.778	68.339	398.008
133	0.714	0.740	0.704	-0.115	22.977	73.556	69.127	403.086
134	0.714	0.740	0.704	-0.125	23.366	74.334	69.915	408.064
135	0.714	0.740	0.704	-0.135	23.755	75.113	70.693	413.042
136	0.714	0.740	0.704	-0.145	24.144	75.891	71.481	418.020
137	0.714	0.740	0.704	-0.155	24.533	76.669	72.269	423.008
138	0.714	0.740	0.704	-0.165	24.922	77.447	73.057	428.086
139	0.714	0.740	0.704	-0.175	25.311	78.225	73.845	433.064
140	0.714	0.740	0.704	-0.185	25.699	78.993	74.633	438.042
141	0.714	0.740	0.704	-0.195	26.088	79.771	75.421	443.020
142	0.714	0.740	0.704	-0.205	26.477	80.549	76.209	448.008
143	0.714	0.740	0.704	-0.215	26.866	81.327	76.997	453.086
144	0.714	0.740	0.704	-0.225	27.255	82.095	77.785	458.064
145	0.714	0.740	0.704	-0.235	27.644	82.873	78.573	463.042
146	0.714	0.740	0.704	-0.245	28.033	83.651	79.361	468.020
147	0.714	0.740	0.704	-0.255	28.422	84.429	80.149	473.008
148	0.714	0.740	0.704	-0.265	28.811	85.197	80.937	478.086
149	0.714	0.740	0.704	-0.275	29.199	85.975	81.725	483.064
150	0.714	0.740	0.704	-0.285	29.588	86.753	82.513	488.042
151	0.714	0.740	0.704	-0.295	29.977	87.531	83.291	493.020
152	0.714	0.740	0.704	-0.305	30.366	88.309	84.079	498.008
153	0.714	0.740	0.704	-0.315	30.755	89.087	84.867	503.086
154	0.714	0.740	0.704	-0.325	31.144	89.865	85.655	508.064
155	0.714	0.740	0.704	-0.335	31.533	90.643	86.443	513.042
156	0.714	0.740	0.704	-0.345	31.922	91.421	87.231	518.020
157	0.714	0.740	0.704	-0.355	32.311	92.199	88.019	523.008
158	0.714	0.740	0.704	-0.365	32.699	92.977	88.797	528.086
159	0.714	0.740	0.704	-0.375	33.088	93.755	89.585	533.064
160	0.714	0.740	0.704	-0.385	33.477	94.533	90.373	538.042
161	0.714	0.740	0.704	-0.395	33.866	95.311	91.161	543.020

Table 67.

JOB KLD74 TAPE 3166F- FILES 176-159, RUNS 9.01-9.22 04/17/79

RUN NO. 9.01 POTNT 7. GRID NO. 4

BOUNDARY LAYER PROPERTIES

		LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y+=35$
FREE STREAM VELOCITY	= 100.592		100.592
FREE STREAM TEMPERATURE	= 69.193		
WALL TEMPERATURE	= 87.767		
WALL HEAT FLUX	= .27062		
FREE STREAM DENSITY	= .67511		
FREE STREAM KINEMATIC VISCOSITY	= .0001626		
DENSITY OF FLUID AT WALL	= .07257		
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001728		
WALL/FREE STREAM DENSITY RATIO	= .66670		
LOCATION REYNOLDS NUMBER (REX)	= 1442266.47		
INPUT VALUE OF VELOCITY DELTA	= .010000		
INPUT VALUE OF TEMPERATURE DELTA	= .000000		
CALCULATED DELTA	= .61162		
DELTA 99.5% INPUT	= .00000		
DISPLACEMENT THICKNESS (DELSTAR)	= .07443		.07426
MOMENTUM THICKNESS (THETAA)	= .05419		.05469
ENERGY-DISSIPATION THICKNESS	= .09823		.09856
ENTHALPY THICKNESS	= .00199		.00222
SHAPE FACTOR 12 (DELSTAR/THETA)	= 1.37357		1.36052
SHAPE FACTOR 12 (ENERGY/THETA)	= 1.61355		1.60757
MOMENTUM THICKNESS REYNOLDS NUMBER	= 2794.32		2814.42
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 3636.12		3829.07
SKIN FRICTION COEFFICIENT	= .003625		
FRICITION VELOCITY	= 4.35712		
LAW OF THE WALL CONSTANT (K)	= .41035		
LAW OF THE WALL CONSTANT (C)	= 5.00000		.12849
WAKE STRENGTH			
CLAUSERS "DELTA" INTEGRAL	= -1.51253		-1.66810
CLAUSERS "C" INTEGRAL	= 9.53658		9.22212
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .26998		.27226
MOMENTUM THICKNESS - CONSTANT DENSITY	= .25455		.25495
SHAPE FACTOR 12 - CONSTANT DENSITY	= 1.26446		1.71484

LOCATION -X- 28.10371

Z = CENTERLINE

Table 68.

JOE KLD74 TAPE 3166R- FILES 13P-159, RUNS 9.01-9.22 04/10/79

RUN NO. 9. POINT 7. GRID NO. 4

REDUCED PROFILE DATA

Table 68.

JOB KLD74 TAPE 316ER- FILES 138-159, RUNS 9.01-9.22 04/17/79

RUN NO. 0. POINT 8. GRID NO. 4

BOUNDARY LAYER PROPERTIES

		LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+RE
FREE STREAM VELOCITY	=	100.016	100.016
FREE STREAM TEMPERATURE	=	60.036	
WALL TEMPERATURE	=	86.192	
WALL HEAT FLUX	=	.07927	
FREE STREAM DENSITY	=	.07512	
FREE STREAM KINEMATIC VISCOSITY	=	.0001635	
DENSITY OF FLUID AT WALL	=	.0007251	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.0001735	
WALL/FREE STREAM DENSITY RATIO	=	.96522	
LOCATION REYNOLDS NUMBER (REX)	=	1442397.33	
INPUT VALUE OF VELOCITY DELTA	=	1.00000	
INPUT VALUE OF TEMPERATURE DELTA	=	1.02100	
CALCULATED DELTA	=		.69516
DELTA 29.5% INPUT	=	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	=	.08113	.08121
MOMENTUM THICKNESS (THETA)	=	.06010	.06025
ENERGY-DISSIPATION THICKNESS	=	.10920	.10937
ENTHALPY THICKNESS	=	.00233	.00234
SHAPE FACTOR 12 (DELSTAR/THETA)	=	1.34991	1.34796
SHAPE FACTOR 12 (ENERGY/THETA)	=	1.081701	1.081415
MOMENTUM THICKNESS REYNOLDS NUMBER	=	3584.97	3592.47
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	4164.43	4168.51
SKIN FRICTION COEFFICIENT	=	.003537	
FRICITION VELOCITY	=	.071560	
LAW OF THE WALL CONSTANT (K)	=	.41200	
LAW OF THE WALL CONSTANT (C)	=	5.00000	
WAKE STRENGTH	=		.09265
CLAUSER'S "DELTA" INTEGRAL	=	-1.72756	-1.83244
CLAUSER'S "C" INTEGRAL	=	9.86577	9.82526
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.57656	.57891
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.06750	.06762
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.26561	1.20125

LOCATION -Y- 26.10721

Z = +6 INCHES

Table 69.

JOB KLD74 TAPE 3156P- FILES 139-159, RUNS 9.71-9.72 04/17/70

RUN NO. R. POINT R. GRID NO. 4

REDUCED PROFILE DATA

	V	U	T	U/U'	THETA	UTAU	U(+)	T(+)	V(+)
1	DELTA	F/T	C	B/E	372	-14.564	8.674	6.876	9.815
2		37	2	80.611	362	-14.167	9.305	7.202	11.776
3		37	2	80.611	467	-12.779	11.419	7.580	10.196
4		44	2	79.96	403	-11.750	12.280	8.272	11.105
5		44	2	79.96	21	-11.113	12.791	8.770	19.590
6		56	2	77.79	21	-10.444	13.363	8.803	21.614
7		56	2	77.79	65	-9.825	13.942	10.615	21.062
8		56	2	77.79	65	-9.875	14.247	10.758	21.087
9		61	2	76.67	26	-8.464	14.555	11.217	19.547
10		61	2	76.67	61	-8.437	14.717	11.777	21.062
11		67	2	75.94	73	-7.534	15.021	12.166	19.797
12		67	2	75.94	66	-7.628	15.322	12.616	20.560
13		67	2	75.94	73	-6.518	15.620	13.226	20.585
14		71	2	74.67	19	-6.186	15.921	13.770	21.120
15		71	2	74.67	69	-6.169	16.212	14.217	21.120
16		71	2	74.67	69	-6.169	16.513	14.771	21.120
17		71	2	74.67	73	-6.171	16.816	15.070	21.120
18		71	2	74.67	73	-6.171	17.117	15.770	21.120
19		74	2	73.17	73	-6.171	17.418	16.463	21.120
20		74	2	73.17	73	-6.171	17.719	16.969	21.120
21		74	2	73.17	73	-6.171	18.020	17.521	21.120
22		74	2	73.17	73	-6.171	18.321	17.923	21.120
23		74	2	73.17	73	-6.171	18.622	18.424	21.120
24		74	2	73.17	73	-6.171	18.923	18.825	21.120
25		74	2	73.17	73	-6.171	19.224	19.226	21.120
26		74	2	73.17	73	-6.171	19.525	19.627	21.120
27		74	2	73.17	73	-6.171	19.826	19.928	21.120
28		74	2	73.17	73	-6.171	20.127	20.029	21.120
29		74	2	73.17	73	-6.171	20.428	20.329	21.120
30		74	2	73.17	73	-6.171	20.729	20.631	21.120
31		74	2	73.17	73	-6.171	21.030	20.932	21.120
32		74	2	73.17	73	-6.171	21.331	21.233	21.120
33		74	2	73.17	73	-6.171	21.632	21.534	21.120
34		74	2	73.17	73	-6.171	21.933	21.835	21.120
35		74	2	73.17	73	-6.171	22.234	22.136	21.120
36		74	2	73.17	73	-6.171	22.535	22.437	21.120
37		74	2	73.17	73	-6.171	22.836	22.737	21.120
38		74	2	73.17	73	-6.171	23.137	23.038	21.120
39		74	2	73.17	73	-6.171	23.438	23.339	21.120
40		74	2	73.17	73	-6.171	23.739	23.640	21.120
41		74	2	73.17	73	-6.171	24.040	23.941	21.120
42		74	2	73.17	73	-6.171	24.341	24.242	21.120
43		74	2	73.17	73	-6.171	24.642	24.543	21.120
44		74	2	73.17	73	-6.171	24.943	24.844	21.120
45		74	2	73.17	73	-6.171	25.244	25.145	21.120
46		74	2	73.17	73	-6.171	25.545	25.446	21.120
47		74	2	73.17	73	-6.171	25.846	25.747	21.120
48		74	2	73.17	73	-6.171	26.147	26.048	21.120
49		74	2	73.17	73	-6.171	26.448	26.349	21.120
50		74	2	73.17	73	-6.171	26.749	26.650	21.120
51		74	2	73.17	73	-6.171	27.050	26.951	21.120
52		74	2	73.17	73	-6.171	27.351	27.252	21.120
53		74	2	73.17	73	-6.171	27.652	27.553	21.120
54		74	2	73.17	73	-6.171	27.953	27.854	21.120
55		74	2	73.17	73	-6.171	28.254	28.155	21.120
56		74	2	73.17	73	-6.171	28.555	28.456	21.120
57		74	2	73.17	73	-6.171	28.856	28.757	21.120
58		74	2	73.17	73	-6.171	29.157	29.058	21.120
59		74	2	73.17	73	-6.171	29.458	29.359	21.120
60		74	2	73.17	73	-6.171	29.759	29.659	21.120
61		74	2	73.17	73	-6.171	30.060	29.961	21.120

Table 69.

JOE KLD74 TAPE 3166R- FILES 173-159, RUNS 9.01-9.22 04/10/79

RUN NO. 9. POINT 10. GRID NO. 4

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y+ = 35$
FREE STREAM VELOCITY	100.772	100.772
FREE STREAM TEMPERATURE	68.155	
WALL TEMPERATURE	88.070	
WALL HEAT FLUX	.57722	
FREE STREAM DENSITY	.37466	
FREE STREAM KINEMATIC VISCOSITY	.0001633	
DENSITY OF FLUID AT WALL	.37194	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001744	
WALL/FREE STREAM DENSITY RATIO	.6764	
LOCATION REYNOLDS NUMBER (REX)	1856334.57	
INPUT VALUE OF VELOCITY DELTA	1.71030	
INPUT VALUE OF TEMPERATURE DELTA	1.65030	
CALCULATED DELTA		.78713
DELTA 29.5% INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.09276	.09275
MOMENTUM THICKNESS (THETA)	.06052	.06073
ENERGY-DISSIPATION THICKNESS	.12440	.12457
ENTHALPY THICKNESS	.00279	.00297
SHAPE FACTOR 12 (DELSTAR/THETA)	1.35377	1.34964
SHAPE FACTOR 72 (ENFFEGY/THETA)	1.81560	1.81257
MOMENTUM THICKNESS REYNOLDS NUMBER	3523.29	3534.56
DISPLACEMENT THICKNESS REYNOLDS NUMBER	4769.77	4769.71
SKIN FRICTION COEFFICIENT	.03453	
FRICTION VELOCITY	.026528	
LAW OF THE WALL CONSTANT (K)	.41000	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.13767
CLAUSIERS "DELTA" INTEGRAL	-2.00285	-2.12634
CLAUSIERS "C" INTEGRAL	11.72400	11.60257
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.08779	.09057
MOMENTUM THICKNESS - CONSTANT DENSITY	.26950	.26922
SHAPE FACTOR 12 - CONSTANT DENSITY	1.26650	1.30025

LOCATION -Y- 36.10761

Z = CENTERLINE

Table 70.

JOB KL074 TAPE 3156R- FILES 135-159, RUNS 9.01-9.22 04/17/79

RUN NO. % POINT ID. GRID NO. 4

REDUCED PROFILE DATA

Table 70.

JOE KLD74 TAPE 3166R- FILES 13F-159, RUNS 9.01-9.22 04/12/79

RUN NO. 9. POINT 12. GRID NO. 4

BOUNDARY LAYER PROPERTIES

		STANDARD INTERPOLATION TO WALL	SUBLAYER FUNCTION FROM WALL TO $\gamma+75$
FREE STREAM VELOCITY	=	101.363	101.363
FREE STREAM TEMPERATURE	=	69.700	
WALL TEMPERATURE	=	89.740	
WALL HEAT FLUX	=	.27730	
FREE STREAM DENSITY	=	.07453	
FREE STREAM KINEMATIC VISCOSITY	=	.0001638	
DENSITY OF FLUID AT WALL	=	.07172	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.7731753	
WALL/FREE STREAM DENSITY RATIO	=	.96235	
LOCATION REYNOLDS NUMBER (REX)	=	2279174.87	
INPUT VALUE OF VELOCITY DELTA	=	1.40000	
INPUT VALUE OF TEMPERATURE DELTA	=	1.65000	
CALCULATED DELTA	=		1.03267
DELTA 99.5% INPUT	=	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	=	.11608	
MOMENTUM THICKNESS (THETAS)	=	.08789	
ENERGY-DISSIPATION THICKNESS	=	.16728	
ENTHALPY THICKNESS	=	.30750	
SHAPE FACTOR 12 (DELSTAR/THETA)	=	1.33797	1.32939
SHAPE FACTOR 72 (ENERGY/THETA)	=	1.62346	1.82138
MOMENTUM THICKNESS REYNOLDS NUMBER	=	4531.97	8540.76
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	6031.94	6071.98
SKIN FRICTION COEFFICIENT	=	.0033333	
FRICTION VELOCITY	=	.41000	
LAW OF THE WALL CONSTANT (K)	=	5.00000	
LAW OF THE WALL CONSTANT (C)	=		.10842
WAKE STRENGTH	=		
CLAUSERS "DELTA" INTEGRAL	=	-2.61522	-2.73092
CLAUSERS "G" INTEGRAL	=	14.54837	14.44136
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.11020	.11746
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.08850	.08860
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.25317	1.27046

LOCATION -Y- 44.20000

Z = +6 INCHES

Table 71.

JOE KLD74 TAPE 3156D- FILES 17A-159, RUNS 9.01-9.02 04/17/79
RUN NO. 9. POINT 12. GRID NO. 4

REDUCED PROFILE DATA

POINT 12

GRID NO. 4

REDUCED PROFILE DATA

Table 71.

JOB KLD74 TAPE 3156R- FILES 138-159, RUNS 9.01-9.02 04/10/79

RUN NO. 9. POINT 14. GRID NO. 4

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUPLAYER FUNCTION FROM WALL TO Y+ = 75
FREE STREAM VELOCITY	101.298	101.268
FREE STREAM TEMPERATURE	68.579	
WALL TEMPERATURE	80.820	
WALL HEAT FLUX	.57728	
FREE STREAM DENSITY	.0001675	
FREE STREAM KINEMATIC VISCOSITY	.0001675	
DENSITY OF FLUID AT WALL	.00017171	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001754	
WALL/FREE STREAM DENSITY RATIO	.000135	
LOCATION REYNOLDS NUMBER (REX)	2696717.06	
INPUT VALUE OF VELOCITY DELTA	1.56000	
INPUT VALUE OF TEMPERATURE DELTA	1.76000	
CALCULATED DELTA		1.12955
DELTA 69.52 INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.12679	.12688
MOMENTUM THICKNESS (THETAP)	.09518	.09537
ENERGY-DISSIPATION THICKNESS	.17344	.17351
ENTHALPY THICKNESS	.00411	.00412
SHAPE FACTOR 12 (DELSTAR/THETA)	1.37216	1.73132
SHAPE FACTOR 32 (ENERGY/THETA)	1.82227	1.82267
MOMENTUM THICKNESS REYNOLDS NUMBER	4012.036	4018.073
DISPLACEMENT THICKNESS REYNOLDS NUMBER	6543.82	6548.47
SKIN FRICTION COEFFICIENT	.003245	
FRICTION VELOCITY	4.16784	
LAW OF THE WALL CONSTANT (K)	.81027	
LAW OF THE WALL CONSTANT (C1)	5.00000	
WAKE STRENGTH		.11010
CLAUSER'S "DELTA" INTEGRAL	-2.87622	-2.98541
CLAUSER'S "G" INTEGRAL	15.87627	15.84897
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.17741	.12276
MOMENTUM THICKNESS - CONSTANT DENSITY	.09588	.09622
SHAPE FACTOR 12 - CONSTANT DENSITY	1.25570	1.27955

LOCATION -X- 52.25000

Z = CENTERLINE

Table 72.

JOE KLD74 TAPE 3156P - FILES 132-159, RUNS 9.01-9.22 04/10/79

RUN NO. 0. POINT 14. GRID NO. 4

REDUCED PROFILE DATA

	Y/ INCHES	U/ FT/SEC	T/ DEG.F	U/UF	T/FTA	U-UE UTAU	U(+) U(-)	T(+) T(-)	Y(+)
1	0.000	3.0	50.0	0.044	-16.2C3	8.100	6.448	8.957	8.957
2	0.000	3.0	51.0	0.045	-14.445	8.095	7.117	12.016	12.016
3	0.000	3.0	52.0	0.046	-13.716	10.050	8.010	14.069	14.069
4	0.000	3.0	53.0	0.047	-13.033	11.035	8.405	16.067	16.067
5	0.000	3.0	54.0	0.048	-12.348	12.029	9.092	20.021	20.021
6	0.000	3.0	55.0	0.049	-11.666	13.025	9.709	25.017	25.017
7	0.000	3.0	56.0	0.050	-11.073	14.021	10.327	28.017	28.017
8	0.000	3.0	57.0	0.051	-10.480	15.017	10.935	32.017	32.017
9	0.000	3.0	58.0	0.052	-9.887	16.013	11.543	35.017	35.017
10	0.000	3.0	59.0	0.053	-9.294	17.009	11.150	42.006	42.006
11	0.000	3.0	60.0	0.054	-8.701	18.005	11.759	46.002	46.002
12	0.000	3.0	61.0	0.055	-8.108	19.001	12.368	50.001	50.001
13	0.000	3.0	62.0	0.056	-7.515	20.000	12.977	54.001	54.001
14	0.000	3.0	63.0	0.057	-6.922	21.000	13.586	58.001	58.001
15	0.000	3.0	64.0	0.058	-6.329	22.000	14.195	62.001	62.001
16	0.000	3.0	65.0	0.059	-5.736	23.000	14.804	66.001	66.001
17	0.000	3.0	66.0	0.060	-5.143	24.000	15.413	70.001	70.001
18	0.000	3.0	67.0	0.061	-4.550	25.000	16.022	74.001	74.001
19	0.000	3.0	68.0	0.062	-3.957	26.000	16.631	78.001	78.001
20	0.000	3.0	69.0	0.063	-3.364	27.000	17.240	82.001	82.001
21	0.000	3.0	70.0	0.064	-2.771	28.000	17.849	86.001	86.001
22	0.000	3.0	71.0	0.065	-2.178	29.000	18.458	90.001	90.001
23	0.000	3.0	72.0	0.066	-1.585	30.000	19.067	94.001	94.001
24	0.000	3.0	73.0	0.067	-1.092	31.000	19.676	98.001	98.001
25	0.000	3.0	74.0	0.068	-5.159	32.000	20.285	102.001	102.001
26	0.000	3.0	75.0	0.069	-4.566	33.000	20.894	106.001	106.001
27	0.000	3.0	76.0	0.070	-3.973	34.000	21.503	110.001	110.001
28	0.000	3.0	77.0	0.071	-3.380	35.000	22.112	114.001	114.001
29	0.000	3.0	78.0	0.072	-2.787	36.000	22.721	118.001	118.001
30	0.000	3.0	79.0	0.073	-2.194	37.000	23.330	122.001	122.001
31	0.000	3.0	80.0	0.074	-1.601	38.000	23.939	126.001	126.001
32	0.000	3.0	81.0	0.075	-1.008	39.000	24.548	130.001	130.001
33	0.000	3.0	82.0	0.076	-4.115	40.000	25.157	134.001	134.001
34	0.000	3.0	83.0	0.077	-3.522	41.000	25.766	138.001	138.001
35	0.000	3.0	84.0	0.078	-2.929	42.000	26.375	142.001	142.001
36	0.000	3.0	85.0	0.079	-2.336	43.000	26.984	146.001	146.001
37	0.000	3.0	86.0	0.080	-1.743	44.000	27.593	150.001	150.001
38	0.000	3.0	87.0	0.081	-1.150	45.000	28.202	154.001	154.001
39	0.000	3.0	88.0	0.082	-5.657	46.000	28.811	158.001	158.001
40	0.000	3.0	89.0	0.083	-5.064	47.000	29.420	162.001	162.001
41	0.000	3.0	90.0	0.084	-4.471	48.000	29.029	166.001	166.001
42	0.000	3.0	91.0	0.085	-3.878	49.000	29.638	170.001	170.001
43	0.000	3.0	92.0	0.086	-3.285	50.000	30.247	174.001	174.001
44	0.000	3.0	93.0	0.087	-2.692	51.000	30.856	178.001	178.001
45	0.000	3.0	94.0	0.088	-2.099	52.000	31.465	182.001	182.001
46	0.000	3.0	95.0	0.089	-1.506	53.000	32.074	186.001	186.001
47	0.000	3.0	96.0	0.090	-9.573	54.000	32.683	190.001	190.001
48	0.000	3.0	97.0	0.091	-9.180	55.000	33.292	194.001	194.001
49	0.000	3.0	98.0	0.092	-8.787	56.000	33.801	198.001	198.001
50	0.000	3.0	99.0	0.093	-8.394	57.000	34.410	202.001	202.001
51	0.000	3.0	100.0	0.094	-7.901	58.000	35.019	206.001	206.001
52	0.000	3.0	101.0	0.095	-7.508	59.000	35.628	210.001	210.001
53	0.000	3.0	102.0	0.096	-7.115	60.000	36.237	214.001	214.001
54	0.000	3.0	103.0	0.097	-6.722	61.000	36.846	218.001	218.001
55	0.000	3.0	104.0	0.098	-6.329	62.000	37.455	222.001	222.001
56	0.000	3.0	105.0	0.099	-5.936	63.000	38.064	226.001	226.001
57	0.000	3.0	106.0	0.100	-5.543	64.000	38.673	230.001	230.001
58	0.000	3.0	107.0	0.101	-5.150	65.000	39.282	234.001	234.001
59	0.000	3.0	108.0	0.102	-4.757	66.000	39.891	238.001	238.001
60	0.000	3.0	109.0	0.103	-4.364	67.000	40.500	242.001	242.001
61	0.000	3.0	110.0	0.104	-3.971	68.000	41.109	246.001	246.001
62	0.000	3.0	111.0	0.105	-3.578	69.000	41.718	250.001	250.001
63	0.000	3.0	112.0	0.106	-3.185	70.000	42.327	254.001	254.001
64	0.000	3.0	113.0	0.107	-2.792	71.000	42.936	258.001	258.001
65	0.000	3.0	114.0	0.108	-2.399	72.000	43.545	262.001	262.001
66	0.000	3.0	115.0	0.109	-1.906	73.000	44.154	266.001	266.001
67	0.000	3.0	116.0	0.110	-1.513	74.000	44.763	270.001	270.001
68	0.000	3.0	117.0	0.111	-1.120	75.000	45.372	274.001	274.001
69	0.000	3.0	118.0	0.112	-0.727	76.000	45.981	278.001	278.001
70	0.000	3.0	119.0	0.113	-0.334	77.000	46.590	282.001	282.001
71	0.000	3.0	120.0	0.114	-0.941	78.000	47.199	286.001	286.001

Table 72.

JOE KLD74 TAPE 3166P- FILES 138-159, RUNS 9.01-9.22 04/10/79

RUN NO. 9. POINT 16. GRID NO. 4

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y+ = 35$
FREE STREAM VELOCITY =	99.904	99.904
FREE STREAM TEMPERATURE =	69.175	
WALL TEMPERATURE =	91.077	
WALL HEAT FLUX =	.07795	
FREE STREAM DENSITY =	.57497	
FREE STREAM KINEMATIC VISCOSITY =	.0001529	
DENSITY OF FLUID AT WALL =	.57199	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001752	
WALL/FREE STREAM DENSITY RATIO =	.96725	
LOCATION REYNOLDS NUMBER (REX) =	376972.282	
INPUT VALUE OF VELOCITY DELTA =	1.90000	
INPUT VALUE OF TEMPERATURE DELTA =	2.15000	
CALCULATED DELTA =		1.72157
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.14749	.14761
MOMENTUM THICKNESS (THETA) =	.11197	.11213
ENERGY-DISSIPATION THICKNESS =	.20458	.20465
ENTHALPY THICKNESS =	.00440	.00441
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.31720	1.31642
SHAPE FACTOR 72 (ENFFGY/THETA) =	1.82699	1.82527
MOMENTUM THICKNESS REYNOLDS NUMBER =	.5723.31	.5721.14
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	7538.74	7544.47
SKIN FRICTION COEFFICIENT =	.003143	
FRICITION VELOCITY =	4.04184	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.12143
CLAUSERS "DELTA" INTEGRAL =	-7.47003	-3.54001
CLAUSERS "F" INTEGRAL =	18.54854	18.51707
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.14740	.14722
MOMENTUM THICKNESS - CONSTANT DENSITY =	.11275	.11291
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.24677	1.26843
LOCATION -X- =	60.20000	
Z = +6 INCHES =		

Table 73.

JOB KLD74 TAPE 31662- FILES 13A-159, RUNS 9.01-9.72 04/17/70

RUN NO. 9. POINT 16. GRID NO. 4

REDUCED PROFILE DATA

Y INCHES	U FT/SEC	V FT/SEC	W FT/SEC	U/U _E	U/TAU	U/U _E	U/U _E	T(+)	Y(+)
112236567	36.46	8.75	1.1	3.67	7.71	15.64	9.26	6.499	10.766
112236567	36.46	8.75	1.1	3.67	7.71	14.64	9.26	7.292	12.187
112236567	36.46	8.75	1.1	3.67	7.71	13.64	9.26	7.932	15.776
112236567	36.46	8.75	1.1	3.67	7.71	12.64	9.26	8.577	17.765
112236567	36.46	8.75	1.1	3.67	7.71	11.64	9.26	8.920	19.680
112236567	36.46	8.75	1.1	3.67	7.71	10.64	9.26	9.570	23.639
112236567	36.46	8.75	1.1	3.67	7.71	9.64	9.26	10.227	31.788
112236567	36.46	8.75	1.1	3.67	7.71	8.64	9.26	11.001	34.500
112236567	36.46	8.75	1.1	3.67	7.71	7.64	9.26	11.744	36.610
112236567	36.46	8.75	1.1	3.67	7.71	6.64	9.26	12.502	38.630
112236567	36.46	8.75	1.1	3.67	7.71	5.64	9.26	13.241	40.649
112236567	36.46	8.75	1.1	3.67	7.71	4.64	9.26	14.079	42.669
112236567	36.46	8.75	1.1	3.67	7.71	3.64	9.26	14.914	44.689
112236567	36.46	8.75	1.1	3.67	7.71	2.64	9.26	15.752	46.709
112236567	36.46	8.75	1.1	3.67	7.71	1.64	9.26	16.600	48.729
112236567	36.46	8.75	1.1	3.67	7.71	0.64	9.26	17.449	50.749
112236567	36.46	8.75	1.1	3.67	7.71	-0.34	9.26	18.300	52.769
112236567	36.46	8.75	1.1	3.67	7.71	-1.54	9.26	19.141	54.789
112236567	36.46	8.75	1.1	3.67	7.71	-2.74	9.26	19.982	56.809
112236567	36.46	8.75	1.1	3.67	7.71	-3.94	9.26	20.823	58.829
112236567	36.46	8.75	1.1	3.67	7.71	-5.14	9.26	21.664	60.849
112236567	36.46	8.75	1.1	3.67	7.71	-6.34	9.26	22.505	62.869
112236567	36.46	8.75	1.1	3.67	7.71	-7.54	9.26	23.346	64.889
112236567	36.46	8.75	1.1	3.67	7.71	-8.74	9.26	24.187	66.909
112236567	36.46	8.75	1.1	3.67	7.71	-10.04	9.26	24.928	68.929
112236567	36.46	8.75	1.1	3.67	7.71	-11.34	9.26	25.769	70.949
112236567	36.46	8.75	1.1	3.67	7.71	-12.64	9.26	26.610	72.969
112236567	36.46	8.75	1.1	3.67	7.71	-13.94	9.26	27.451	74.989
112236567	36.46	8.75	1.1	3.67	7.71	-15.24	9.26	28.292	76.009
112236567	36.46	8.75	1.1	3.67	7.71	-16.54	9.26	29.133	77.029
112236567	36.46	8.75	1.1	3.67	7.71	-17.84	9.26	29.974	78.049
112236567	36.46	8.75	1.1	3.67	7.71	-19.14	9.26	30.815	79.069
112236567	36.46	8.75	1.1	3.67	7.71	-20.44	9.26	31.656	80.089
112236567	36.46	8.75	1.1	3.67	7.71	-21.74	9.26	32.497	81.109
112236567	36.46	8.75	1.1	3.67	7.71	-23.04	9.26	33.338	82.129
112236567	36.46	8.75	1.1	3.67	7.71	-24.34	9.26	34.179	83.149
112236567	36.46	8.75	1.1	3.67	7.71	-25.64	9.26	35.020	84.169
112236567	36.46	8.75	1.1	3.67	7.71	-26.94	9.26	35.861	85.189
112236567	36.46	8.75	1.1	3.67	7.71	-28.24	9.26	36.702	86.209
112236567	36.46	8.75	1.1	3.67	7.71	-29.54	9.26	37.543	87.229
112236567	36.46	8.75	1.1	3.67	7.71	-30.84	9.26	38.384	88.249
112236567	36.46	8.75	1.1	3.67	7.71	-32.14	9.26	39.225	89.269
112236567	36.46	8.75	1.1	3.67	7.71	-33.44	9.26	39.966	90.289
112236567	36.46	8.75	1.1	3.67	7.71	-34.74	9.26	40.807	91.309
112236567	36.46	8.75	1.1	3.67	7.71	-36.04	9.26	41.648	92.329
112236567	36.46	8.75	1.1	3.67	7.71	-37.34	9.26	42.489	93.349
112236567	36.46	8.75	1.1	3.67	7.71	-38.64	9.26	43.330	94.369
112236567	36.46	8.75	1.1	3.67	7.71	-40.04	9.26	44.171	95.389
112236567	36.46	8.75	1.1	3.67	7.71	-41.34	9.26	45.012	96.409
112236567	36.46	8.75	1.1	3.67	7.71	-42.64	9.26	45.853	97.429
112236567	36.46	8.75	1.1	3.67	7.71	-43.94	9.26	46.694	98.449
112236567	36.46	8.75	1.1	3.67	7.71	-45.24	9.26	47.535	99.469
112236567	36.46	8.75	1.1	3.67	7.71	-46.54	9.26	48.376	100.489
112236567	36.46	8.75	1.1	3.67	7.71	-47.84	9.26	49.217	101.509
112236567	36.46	8.75	1.1	3.67	7.71	-49.14	9.26	50.058	102.529
112236567	36.46	8.75	1.1	3.67	7.71	-50.44	9.26	50.899	103.549
112236567	36.46	8.75	1.1	3.67	7.71	-51.74	9.26	51.740	104.569
112236567	36.46	8.75	1.1	3.67	7.71	-53.04	9.26	52.581	105.589
112236567	36.46	8.75	1.1	3.67	7.71	-54.34	9.26	53.422	106.609
112236567	36.46	8.75	1.1	3.67	7.71	-55.64	9.26	54.263	107.629
112236567	36.46	8.75	1.1	3.67	7.71	-56.94	9.26	55.104	108.649
112236567	36.46	8.75	1.1	3.67	7.71	-58.24	9.26	55.945	109.669
112236567	36.46	8.75	1.1	3.67	7.71	-59.54	9.26	56.786	110.689
112236567	36.46	8.75	1.1	3.67	7.71	-60.84	9.26	57.627	111.709
112236567	36.46	8.75	1.1	3.67	7.71	-62.14	9.26	58.468	112.729
112236567	36.46	8.75	1.1	3.67	7.71	-63.44	9.26	59.309	113.749
112236567	36.46	8.75	1.1	3.67	7.71	-64.74	9.26	60.150	114.769
112236567	36.46	8.75	1.1	3.67	7.71	-66.04	9.26	60.991	115.789
112236567	36.46	8.75	1.1	3.67	7.71	-67.34	9.26	61.832	116.809
112236567	36.46	8.75	1.1	3.67	7.71	-68.64	9.26	62.673	117.829
112236567	36.46	8.75	1.1	3.67	7.71	-69.94	9.26	63.514	118.849
112236567	36.46	8.75	1.1	3.67	7.71	-71.24	9.26	64.355	119.869
112236567	36.46	8.75	1.1	3.67	7.71	-72.54	9.26	65.206	120.889
112236567	36.46	8.75	1.1	3.67	7.71	-73.84	9.26	66.047	121.909
112236567	36.46	8.75	1.1	3.67	7.71	-75.14	9.26	66.888	122.929
112236567	36.46	8.75	1.1	3.67	7.71	-76.44	9.26	67.729	123.949
112236567	36.46	8.75	1.1	3.67	7.71	-77.74	9.26	68.570	124.969
112236567	36.46	8.75	1.1	3.67	7.71	-79.04	9.26	69.411	125.989
112236567	36.46	8.75	1.1	3.67	7.71	-80.34	9.26	70.252	126.999
112236567	36.46	8.75	1.1	3.67	7.71	-81.64	9.26	71.093	127.999
112236567	36.46	8.75	1.1	3.67	7.71	-82.94	9.26	71.934	128.999
112236567	36.46	8.75	1.1	3.67	7.71	-84.24	9.26	72.775	129.999
112236567	36.46	8.75	1.1	3.67	7.71	-85.54	9.26	73.616	130.999
112236567	36.46	8.75	1.1	3.67	7.71	-86.84	9.26	74.457	131.999
112236567	36.46	8.75	1.1	3.67	7.71	-88.14	9.26	75.308	132.999
112236567	36.46	8.75	1.1	3.67	7.71	-89.44	9.26	76.149	133.999
112236567	36.46	8.75	1.1	3.67	7.71	-90.74	9.26	77.000	134.999
112236567	36.46	8.75	1.1	3.67	7.71	-92.04	9.26	77.841	135.999
112236567	36.46	8.75	1.1	3.67	7.71	-93.34	9.26	78.682	136.999
112236567	36.46	8.75	1.1	3.67	7.71	-94.64	9.26	79.523	137.999
112236567	36.46	8.75	1.1	3.67	7.71	-95.94	9.26	80.364	138.999
112236567	36.46	8.75	1.1	3.67	7.71	-97.24	9.26	81.205	139.999
112236567	36.46	8.75	1.1	3.67	7.71	-98.54	9.26	82.046	140.999
112236567	36.46	8.75	1.1	3.67	7.71	-99.84	9.26	82.887	141.999
112236567	36.46	8.75	1.1	3.67	7.71	-101.14	9.26	83.728	142.999
112236567	36.46	8.75	1.1	3.67	7.71	-102.44	9.26	84.569	143.999
112236567	36.46	8.75	1.1	3.67	7.71	-103.74	9.26	85.410	144.999
112236567	36.46	8.75	1.1	3.67	7.71	-105.04	9.26	86.251	145.999
112236567	36.46	8.75	1.1	3.67	7.71	-106.34	9.26	87.092	146.999
112236567	36.46	8.75	1.1	3.67	7.71	-107.64	9.26	87.933	147.999
112236567	36.46	8.75	1.1	3.67	7.71	-108.94	9.26	88.774	148.999
112236567	36.46	8.75	1.1	3.67	7.71	-110.24	9.26	89.615	149.999
112236567	36								

JOB KLD74 TAPE 3166R- FILES 138-159, RUNS 9.01-9.22 04/10/79

RUN NO. 9. POINT 17. GRID NO. 4

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y=75
FREE STREAM VELOCITY	100.503	100.503
FREE STREAM TEMPERATURE	69.198	
WALL TEMPERATURE	91.717	
WALL HEAT FLUX	.07837	
FREE STREAM DENSITY	.57496	
FREE STREAM KINEMATIC VISCOSITY	.0001626	
DENSITY OF FLUID AT WALL	.57130	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001754	
WALL/FREE STREAM DENSITY RATIO	.95917	
LOCATION REYNOLDS NUMBER (REX)	3095196.34	
INPUT VALUE OF VELOCITY DELTA	1.92700	
INPUT VALUE OF TEMPERATURE DELTA	2.15800	
CALCULATED DELTA		1.35254
DELTA 99.5% INPUT	.00700	
DISPLACEMENT THICKNESS (DFLSTAR)	.14836	.14852
MOMENTUM THICKNESS (THETA)	.11267	.11273
ENERGY-DISSIPATION THICKNESS	.20577	.20581
ENTHALPY THICKNESS	.00471	.00471
SHAPE FACTOR 12 (DFLSTAR/THETA)	1.31762	1.31752
SHAPE FACTOR 32 (ENERGY/THETA)	1.82746	1.82582
MOMENTUM THICKNESS REYNOLDS NUMBER	5789.31	5795.84
DISPLACEMENT THICKNESS REYNOLDS NUMBER	7628.12	7636.14
SKIN FRICTION COEFFICIENT	.003147	
FRICITION VELOCITY	4.07789	
LAW OF THE WALL CONSTANT (K)	4.10000	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.10171
CLAUSERS "DFLTA" INTEGRAL	-7.42565	-7.55121
CLAUSERS "C" INTEGRAL	18.45581	18.47029
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.14122	.14384
MOMENTUM THICKNESS - CONSTANT DENSITY	.11347	.11354
SHAPE FACTOR 12 - CONSTANT DENSITY	1.24529	1.26697

LOCATION -X- 60.20000

Z = -6 INCHES

Table 74.

JOE KLD74 TAPE 21560- FILES 178-159, RUNS 9.01-9.22 08/10/70

RUN NO. 9. POINT 17. GRID NO. 4

REDUCED PROFILE DATA

Y	U	T	U/U'	T/U/U'	U-U'	U-U'	U-U'	T-U-U'	Y
1	TA	F	DE	F	DE	U-U'	U-U'	U-U'	TA
2	36	54	36	97	364	370	-15.0	12.1	9.976
3	33	33	83	33	334	743	-13.0	13.3	6.292
4	47	47	47	47	475	605	-13.0	13.3	1.133
5	40	40	40	40	401	432	-13.0	13.3	8.666
6	54	54	54	54	548	454	-12.0	12.1	9.118
7	57	57	57	57	571	511	-11.0	11.1	9.686
8	55	55	55	55	556	500	-10.0	10.0	10.256
9	58	58	58	58	589	558	-10.0	10.0	8.844
10	57	57	57	57	571	557	-10.0	10.0	10.956
11	55	55	55	55	557	503	-10.0	10.0	11.425
12	53	53	53	53	537	511	-10.0	10.0	11.905
13	56	56	56	56	567	546	-10.0	10.0	12.567
14	52	52	52	52	527	500	-10.0	10.0	12.847
15	50	50	50	50	507	500	-10.0	10.0	13.470
16	53	53	53	53	537	503	-10.0	10.0	14.517
17	51	51	51	51	517	500	-10.0	10.0	15.511
18	50	50	50	50	507	500	-10.0	10.0	16.226
19	49	49	49	49	497	500	-10.0	10.0	16.672
20	52	52	52	52	527	500	-10.0	10.0	17.129
21	50	50	50	50	507	500	-10.0	10.0	17.679
22	48	48	48	48	487	500	-10.0	10.0	18.179
23	47	47	47	47	477	500	-10.0	10.0	18.647
24	46	46	46	46	467	500	-10.0	10.0	19.127
25	45	45	45	45	457	500	-10.0	10.0	19.604
26	44	44	44	44	447	500	-10.0	10.0	20.074
27	43	43	43	43	437	500	-10.0	10.0	20.544
28	42	42	42	42	427	500	-10.0	10.0	21.014
29	41	41	41	41	417	500	-10.0	10.0	21.484
30	40	40	40	40	407	500	-10.0	10.0	21.954
31	39	39	39	39	397	500	-10.0	10.0	22.424
32	38	38	38	38	387	500	-10.0	10.0	22.894
33	37	37	37	37	377	500	-10.0	10.0	23.364
34	36	36	36	36	367	500	-10.0	10.0	23.834
35	35	35	35	35	357	500	-10.0	10.0	24.304
36	34	34	34	34	347	500	-10.0	10.0	24.774
37	33	33	33	33	337	500	-10.0	10.0	25.244
38	32	32	32	32	327	500	-10.0	10.0	25.714
39	31	31	31	31	317	500	-10.0	10.0	26.184
40	30	30	30	30	307	500	-10.0	10.0	26.654
41	29	29	29	29	297	500	-10.0	10.0	27.124
42	28	28	28	28	287	500	-10.0	10.0	27.594
43	27	27	27	27	277	500	-10.0	10.0	28.064
44	26	26	26	26	267	500	-10.0	10.0	28.534
45	25	25	25	25	257	500	-10.0	10.0	28.904
46	24	24	24	24	247	500	-10.0	10.0	29.374
47	23	23	23	23	237	500	-10.0	10.0	29.744
48	22	22	22	22	227	500	-10.0	10.0	30.114
49	21	21	21	21	217	500	-10.0	10.0	30.484
50	20	20	20	20	207	500	-10.0	10.0	30.854
51	19	19	19	19	197	500	-10.0	10.0	31.224
52	18	18	18	18	187	500	-10.0	10.0	31.594
53	17	17	17	17	177	500	-10.0	10.0	31.964
54	16	16	16	16	167	500	-10.0	10.0	32.334
55	15	15	15	15	157	500	-10.0	10.0	32.704
56	14	14	14	14	147	500	-10.0	10.0	33.074
57	13	13	13	13	137	500	-10.0	10.0	33.444
58	12	12	12	12	127	500	-10.0	10.0	33.814
59	11	11	11	11	117	500	-10.0	10.0	34.184
60	10	10	10	10	107	500	-10.0	10.0	34.554
61	9	9	9	9	97	500	-10.0	10.0	34.924
62	8	8	8	8	87	500	-10.0	10.0	35.294
63	7	7	7	7	77	500	-10.0	10.0	35.664
64	6	6	6	6	67	500	-10.0	10.0	36.034
65	5	5	5	5	57	500	-10.0	10.0	36.404
66	4	4	4	4	47	500	-10.0	10.0	36.774
67	3	3	3	3	37	500	-10.0	10.0	37.144
68	2	2	2	2	27	500	-10.0	10.0	37.514
69	1	1	1	1	17	500	-10.0	10.0	37.884
70	0	0	0	0	07	500	-10.0	10.0	38.254
71	0	0	0	0	07	500	-10.0	10.0	38.624
72	0	0	0	0	07	500	-10.0	10.0	39.004

Table 74.

JOS KLD74 TAPE 3166R- FILS 13E-159, RUNS 9.01-9.22 04/17/79

RUN NO. 9. POINT 18. GRID NO. 4

BOUNDARY LAYER PROPERTIES

STANDARD
LINEAR
INTERPOLATION
TO WALL

SUPERLAYER
FUNCTION FROM
WALL TO $y+=35$

FREE STREAM VELOCITY	=	100.386	100.386
FREE STREAM TEMPERATURE	=	69.279	
WALL TEMPERATURE	=	91.760	
WALL HEAT FLUX	=	.27913	
FREE STREAM DENSITY	=	.27956	
FREE STREAM KINEMATIC VISCOSITY	=	.0001620	
DENSITY OF FLUID AT WALL	=	.007161	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.0001754	
WALL/FREE STREAM DENSITY RATIO	=	.05911	
LOCATION REYNOLDS NUMBER (REX)	=	3498176.37	
INPUT VALUE OF VELOCITY DELTA	=	2.20000	
INPUT VALUE OF TEMPERATURE DELTA	=	2.50000	
CALCULATED DELTA	=		1.42645
DELTA 9.0% INPUT	=	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	=	.15986	.15994
MOMENTUM THICKNESS (THETA)	=	.12104	.12124
ENERGY-DISSIPATION THICKNESS	=	.22118	.22131
E' THALPY THICKNESS	=	.00524	.00524
SHAPE FACTOR 12 (DELSTAR/THETA)	=	1.32086	1.71916
SHAPE FACTOR 72 (ENERGY/THETA)	=	1.82732	1.82547
MOMENTUM THICKNESS REYNOLDS NUMBER	=	5216.01	6276.12
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	5210.49	5213.26
SKIN FRICTION COEFFICIENT	=	.003777	
FRICITION VELOCITY	=	4.02088	
LAW OF THE WALL CONSTANT (K)	=	.41000	
LAW OF THE WALL CONSTANT (C)	=	5.00000	
WAKE STRENGTH	=		.13791
CLAUSERS "DELTA" INTEGRAL	=	-3.71652	-3.86331
CLAUSERS "G" INTEGRAL	=	20.42429	20.32668
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.15178	.15474
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.12192	.12213
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.24434	1.26707

LOCATION -y- 68.12000

Z = CENTERLINE

Table 75.

JOB KL074 TAPE 376cF- FILES 138-159, RUNS 9.01-9.72 04/17/76
RUN NO. 9 P01HT 19 G01D NO. 1

SEDUCED PERSON'S DATA

Table 75.

JOB KLD74 TAPE 3166P- FILES 138-159, RUNS 9.71-9.22 04/17/79

RUN NO. 9. POINT 19. GRID NO. 4

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+ = 35
FREE STREAM VELOCITY	100.232	100.232
FREE STREAM TEMPERATURE	67.964	
WALL TEMPERATURE	90.500	
WALL HEAT FLUX	.07834	
FREE STREAM DENSITY	.07494	
FREE STREAM KINEMATIC VISCOSITY	.0001627	
DENSITY OF FLUID AT WALL	.57137	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001751	
WALL/FREE STREAM DENSITY RATIO	.95914	
LOCATION REYNOLDS NUMBER (REX)	3011884.56	
INPUT VALUE OF VELOCITY DELTA	2.40000	
INPUT VALUE OF TEMPERATURE DELTA	2.50700	
CALCULATED DELTA		1.56099
DELTA .09.52 INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.17361	.17361
MOMENTUM THICKNESS (THETA)	.13122	.13146
ENERGY-DISSIPATION THICKNESS	.23970	.23999
ENTHALPY THICKNESS	.00590	.00591
SHAPE FACTOR 12 (DELSTAR/THETA)	.1.32325	.1.72059
SHAPE FACTOR 32 (ENERGY/THETA)	.1.82672	.1.92472
MOMENTUM THICKNESS REYNOLDS NUMBER	.6738.23	.6750.87
DISPLACEMENT THICKNESS REYNOLDS NUMBER	.8915.02	.8915.01
SKIN FRICTION COEFFICIENT	.0.77228	
FRICITION VELOCITY	.3.98226	
LAW OF THE WALL CONSTANT (K)	.41700	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.13971
CLAUSERS "DELTA" INTEGRAL	-4.05934	-4.22154
CLAUSERS "G" INTEGRAL	22.49977	22.32777
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.16449	.16777
MOMENTUM THICKNESS - CONSTANT DENSITY	.17221	.13247
SHAPE FACTOR 12 - CONSTANT DENSITY	1.24418	1.26602

LOCATION -X- 76.18701

Z = CENTERLINE

Table 76.

JOE KLOTH TAPE 3156A- FILES 13P-159, FUNS 9-21-9-22 7/17/78

RUN NO. 9 POINT 19. ERTD NO. 4

REDUCED PROFILE DATA

Table 76.

JOB KLD74 TAPE 316AF - FILES 174-159, RUNS 9.01-9.72 74/10/79

RUN NO. 9. POINT 20. GRID NO. 4

BOUNDARY LAYER PROPERTIES

		LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y+ = 75$
FREE STREAM VELOCITY	=	100.286	100.286
FREE STREAM TEMPERATURE	=	68.769	68.769
WALL TEMPERATURE	=	97.817	97.817
WALL HEAT FLUX	=	.07954	.07954
FREE STREAM KINEMATIC VISCOSITY	=	.07458	.07458
DENSITY OF FLUID AT WALL	=	.0001629	.0001629
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.0001753	.0001753
WALL/FREE STREAM DENSITY RATIO	=	.95918	.95918
LOCATION REYNOLDS NUMBER (REX)	=	3908723.59	3908723.59
INPUT VALUE OF VELOCITY DELTA	=	2.42500	2.42500
INPUT VALUE OF TEMPERATURE DELTA	=	2.75000	2.75000
CALCULATED DELTA	=		1.63574
DELTA COEF INPUT	=	.00000	.00000
DISPLACEMENT THICKNESS (DELSTAR)	=	.18388	.18388
MOMENTUM THICKNESS (THETA)	=	.13714	.13714
ENERGY-DISSIPATION THICKNESS	=	.25000	.25000
ENTHALPY THICKNESS	=	.20629	.20637
SHAPE FACTOR 12 (DELSTAR/THETA)	=	.1.31999	.1.31999
SHAPE FACTOR 72 (ENERGY/THETA)	=	.1.62887	.1.62887
MOMENTUM THICKNESS REYNOLDS NUMBER	=	.73646	.73646
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	.9260.99	.9260.99
SKIN FRICTION COEFFICIENT	=	.0003000	.0003000
FRICITION VELOCITY	=	3.96968	3.96968
LAW OF THE WALL CONSTANT (K)	=	.41700	.41700
LAW OF THE WALL CONSTANT (C)	=	5.00000	5.00000
WAKE STRENGTH	=		.13657
CLAUSERS "DELTA" INTEGRAL	=	-4.25325	-4.41220
CLAUSERS "C" INTEGRAL	=	23.32972	23.14683
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.17152	.17465
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.13814	.13839
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.24177	1.26209

LOCATION -X- 76.18001

Z = +6 INCHES

Table 77.

JOE KLD74 TAPE 3166P- FILES 138-159, RUNS 9.71-9.72 04/17/79

RUN NO. °. POINT 20. GRID NO. 4

REDUCED PROFILE DATA

Table 77.

JOE KLD74 TAPE 3166R- FILES 178-159, RUNS 9.21-9.22 74/17/79

RUN NO. 9. POINT 21. GRID NO. 4

BOUNDARY LAYER PROPERTIES

		LINEAR INTERPOLATION TO WALL	STANDARD SUPLAYER FUNCTION FROM WALL TO Y+35
FREE STREAM VELOCITY	=	99.770	99.739
FREE STREAM TEMPERATURE	=	68.762	
WALL TEMPERATURE	=	91.370	
WALL HEAT FLUX	=	0.37214	
FREE STREAM DENSITY	=	0.57482	
FREE STREAM KINEMATIC VISCOSITY	=	0.0001631	
DENSITY OF FLUID AT WALL	=	0.00017176	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	0.0001756	
WALL/FREE STREAM DENSITY RATIO	=	0.95917	
LOCATION REYNOLDS NUMBER (REX)	=	3882019.72	
INPUT VALUE OF VELOCITY DELTA	=	2.45000	
INPUT VALUE OF TEMPERATURE DELTA	=	2.67000	
CALCULATED DELTA	=		1.62362
DELTA 99.5% INPUT	=	0.00707	
DISPLACEMENT THICKNESS (DELSTA)	=	0.17694	.17694
MOMENTUM THICKNESS (THETA)	=	0.13427	.13453
ENERGY-DISSIPATION THICKNESS	=	0.24566	.24587
ENTHALPY THICKNESS	=	0.00618	.00609
SHAPE FACTOR 12 (DELSTAR/THETA)	=	1.31784	1.31527
SHAPE FACTOR 32 (ENERGY/THETA)	=	1.82964	1.82760
MOMENTUM THICKNESS REYNOLDS NUMBER	=	6.042015	6.055055
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	9.015064	9.016043
SKIN FRICTION COEFFICIENT	=	0.037040	
FRICITION VELOCITY	=	3.097036	
LAW OF THE WALL CONSTANT (K)	=	0.41000	
LAW OF THE WALL CONSTANT (C)	=	5.00000	
WAKE STRENGTH	=		.11028
CLAUSERS "DELTA" INTEGRAL	=	-4.12940	-4.29307
CLAUSERS "G" INTEGRAL	=	22.49630	22.31402
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	0.16765	.17290
MOMENTUM THICKNESS - CONSTANT DENSITY	=	0.13526	.13554
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.23941	1.26789

LOCATION -Y- 76.18701

Z = -6 INCHES

Table 78.

JOB KLD74 TAPE 3256R- FILES 138-159, RUNS 9.01-9.72 08/17/79

FUN NO. S. POTNT 21. GRID NO. 4

REDUCED FEOFIL FILE DATA

Y	CH	S	U	T	U/U'	THETA	U-U'	U(+)	T(+)	Y(+)
1	1	1	3	4	3	3	3	7	7	12
2	1	1	3	4	3	3	3	7	7	14
3	1	1	3	4	3	3	3	8	8	16
4	1	1	3	4	3	3	3	8	8	18
5	1	1	3	4	3	3	3	8	8	20
6	1	1	3	4	3	3	3	9	9	23
7	1	1	3	4	3	3	3	9	9	25
8	1	1	3	4	3	3	3	9	9	26
9	1	1	3	4	3	3	3	9	9	27
10	1	1	3	4	3	3	3	9	9	28
11	1	1	3	4	3	3	3	9	9	29
12	1	1	3	4	3	3	3	9	9	30
13	1	1	3	4	3	3	3	9	9	31
14	1	1	3	4	3	3	3	9	9	32
15	1	1	3	4	3	3	3	9	9	33
16	1	1	3	4	3	3	3	9	9	34
17	1	1	3	4	3	3	3	9	9	35
18	1	1	3	4	3	3	3	9	9	36
19	1	1	3	4	3	3	3	9	9	37
20	1	1	3	4	3	3	3	9	9	38
21	1	1	3	4	3	3	3	9	9	39
22	1	1	3	4	3	3	3	9	9	40
23	1	1	3	4	3	3	3	9	9	41
24	1	1	3	4	3	3	3	9	9	42
25	1	1	3	4	3	3	3	9	9	43
26	1	1	3	4	3	3	3	9	9	44
27	1	1	3	4	3	3	3	9	9	45
28	1	1	3	4	3	3	3	9	9	46
29	1	1	3	4	3	3	3	9	9	47
30	1	1	3	4	3	3	3	9	9	48
31	1	1	3	4	3	3	3	9	9	49
32	1	1	3	4	3	3	3	9	9	50
33	1	1	3	4	3	3	3	9	9	51
34	1	1	3	4	3	3	3	9	9	52
35	1	1	3	4	3	3	3	9	9	53
36	1	1	3	4	3	3	3	9	9	54
37	1	1	3	4	3	3	3	9	9	55
38	1	1	3	4	3	3	3	9	9	56
39	1	1	3	4	3	3	3	9	9	57
40	1	1	3	4	3	3	3	9	9	58
41	1	1	3	4	3	3	3	9	9	59
42	1	1	3	4	3	3	3	9	9	60
43	1	1	3	4	3	3	3	9	9	61
44	1	1	3	4	3	3	3	9	9	62
45	1	1	3	4	3	3	3	9	9	63
46	1	1	3	4	3	3	3	9	9	64
47	1	1	3	4	3	3	3	9	9	65
48	1	1	3	4	3	3	3	9	9	66
49	1	1	3	4	3	3	3	9	9	67
50	1	1	3	4	3	3	3	9	9	68
51	1	1	3	4	3	3	3	9	9	69
52	1	1	3	4	3	3	3	9	9	70
53	1	1	3	4	3	3	3	9	9	71
54	1	1	3	4	3	3	3	9	9	72
55	1	1	3	4	3	3	3	9	9	73
56	1	1	3	4	3	3	3	9	9	74
57	1	1	3	4	3	3	3	9	9	75
58	1	1	3	4	3	3	3	9	9	76
59	1	1	3	4	3	3	3	9	9	77
60	1	1	3	4	3	3	3	9	9	78
61	1	1	3	4	3	3	3	9	9	79
62	1	1	3	4	3	3	3	9	9	80
63	1	1	3	4	3	3	3	9	9	81
64	1	1	3	4	3	3	3	9	9	82
65	1	1	3	4	3	3	3	9	9	83
66	1	1	3	4	3	3	3	9	9	84
67	1	1	3	4	3	3	3	9	9	85
68	1	1	3	4	3	3	3	9	9	86
69	1	1	3	4	3	3	3	9	9	87
70	1	1	3	4	3	3	3	9	9	88
71	1	1	3	4	3	3	3	9	9	89
72	1	1	3	4	3	3	3	9	9	90
73	1	1	3	4	3	3	3	9	9	91
74	1	1	3	4	3	3	3	9	9	92
75	1	1	3	4	3	3	3	9	9	93
76	1	1	3	4	3	3	3	9	9	94
77	1	1	3	4	3	3	3	9	9	95
78	1	1	3	4	3	3	3	9	9	96

Table 78.

JOB KLD74 TAPE 3166R- FILES 138-159, RUNS 9.01-9.22 04/17/79

RUN NO. 9. POINT 22. GRID NO. 4

BOUNDARY LAYER PROPERTIES

		LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+ = 35
FREE STREAM VELOCITY	=	100.636	100.636
FREE STREAM TEMPERATURE	=	69.316	
WALL TEMPERATURE	=	91.877	
WALL HEAT FLUX	=	.07764	
FREE STREAM DENSITY	=	.0001634	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.07162	
MOMENTUM VISCOSITY OF FLUID AT WALL	=	.0001750	
WALL/FREE STREAM DENSITY RATIO	=	.95011	
LOCATION REYNOLDS NUMBER (REFX)	=	4711326.50	
INPUT VALUE OF VELOCITY DELTA	=	2.66500	
INPUT VALUE OF TEMPERATURE DELTA	=	3.00000	
(CALCULATED) DELTA	=		1.60511
DELTA 99.5% INPUT	=	.15000	
DISPLACEMENT THICKNESS (DELSTAR)	=	.17947	.17947
MOMENTUM THICKNESS (THETA)	=	.12631	.13615
ENERGY-DISSIPATION THICKNESS	=	.24954	.24967
ENTHALPY THICKNESS	=	.00617	.00514
SHAPE FACTOR 12 (DELSTAR/THETA)	=	1.071049	1.071049
SHAPE FACTOR 22 (ENERGY/THETA)	=	1.022731	1.022622
MOMENTUM THICKNESS REYNOLDS NUMBER	=	605.69	6997.74
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	9211.22	9211.14
SKIN FRICTION COEFFICIENT	=	.0025001	
FRICITION VELOCITY	=	3.98760	
LAW OF THE WALL CONSTANT (K)	=	.41000	
LAW OF THE WALL CONSTANT (C)	=	5.00000	.15016
WAKE STRENGTH	=		
CLAUSERS 'DELTA' INTEGRAL	=	-4.25056	-4.36257
CLAUSERS 'C' INTEGRAL	=	27.22857	23.11617
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.17769	.17338
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.17704	.13710
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.24697	1.26367
LOCATION -X-		84.00700	
Z = CENTERLINE			

Table 79.

JCF KLD74 TAPE 3166A FILES 13E-159, RUNS 9.01-9.22 04/17/79

RUN NO. 9. POINT 22.

GRID NO. 4

REDUCED PROFILE DATA

	U	T	U-U'	U-U'	T-T'	Y
TA	F T / F C	D E	U/U'	THF TA	U(U)	T(T)
3	3 2 1 14	3 2 1 17	3 3 5 0	-1 6 0 0	5 0 9 8 1	9 0 7 9 6
4	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	6 0 8 4 1	1 2 0 1 2 4
5	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	7 0 6 7 7	1 4 0 7 6 4
6	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	8 0 2 1 2	1 7 0 7 2 7
7	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	8 0 4 0 2	1 8 0 7 2 4
8	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	2 2 6 0 5	2 2 6 0 5 6
9	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	3 3 0 5 2	3 3 0 5 2 7
10	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	3 3 9 8 7	3 3 9 8 7
11	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	4 3 1 9 7	4 3 1 9 7
12	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	5 0 6 2 7	5 0 6 2 7
13	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	6 2 0 6 6	6 2 0 6 6
14	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	7 6 0 4 6	8 8 0 4 9 1
15	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	9 9 0 5 7	9 9 0 5 7
16	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 0 0 1 9	1 0 0 1 9
17	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 0 0 2 2	1 0 0 2 2
18	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
19	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
20	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
21	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
22	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
23	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
24	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
25	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
26	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
27	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
28	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
29	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
30	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
31	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
32	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
33	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
34	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
35	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
36	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
37	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
38	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
39	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
40	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
41	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
42	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
43	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
44	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
45	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
46	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
47	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
48	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
49	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
50	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
51	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
52	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
53	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
54	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
55	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
56	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
57	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
58	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
59	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
60	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
61	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
62	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
63	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
64	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
65	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
66	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
67	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
68	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
69	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
70	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
71	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
72	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
73	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
74	3 2 1 17	3 2 1 17	3 3 5 0	-1 6 0 0	1 1 0 2 1	1 1 0 2 1
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Table 79.

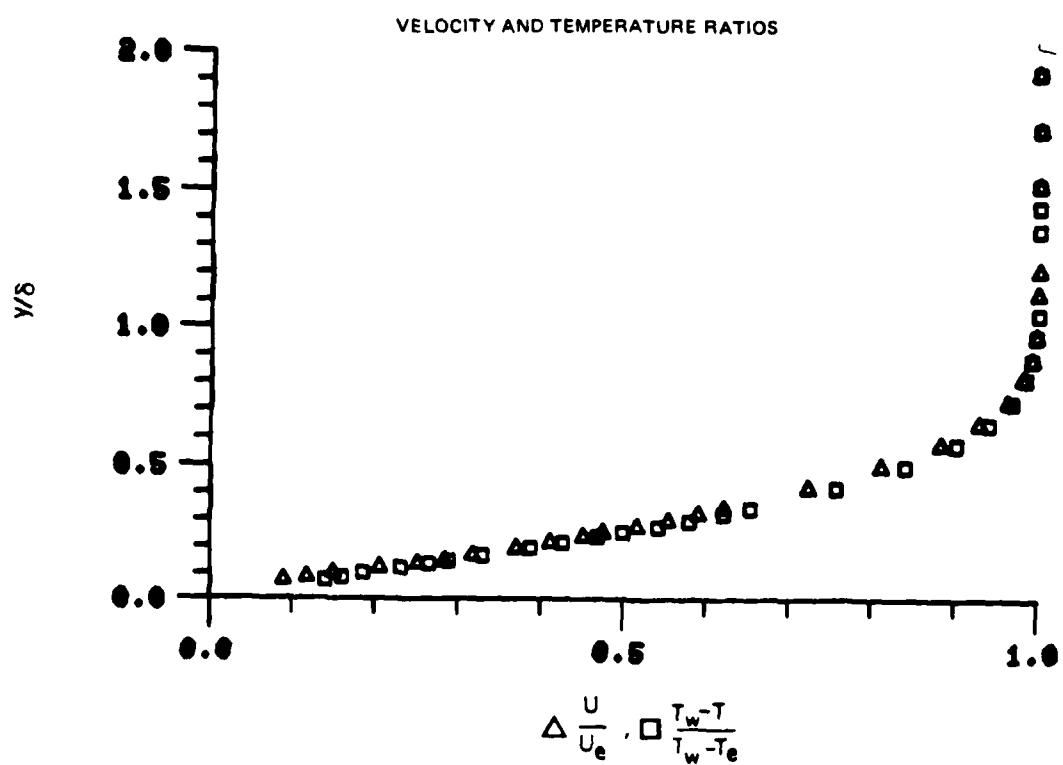


Figure 1. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 1

78-12-100-1

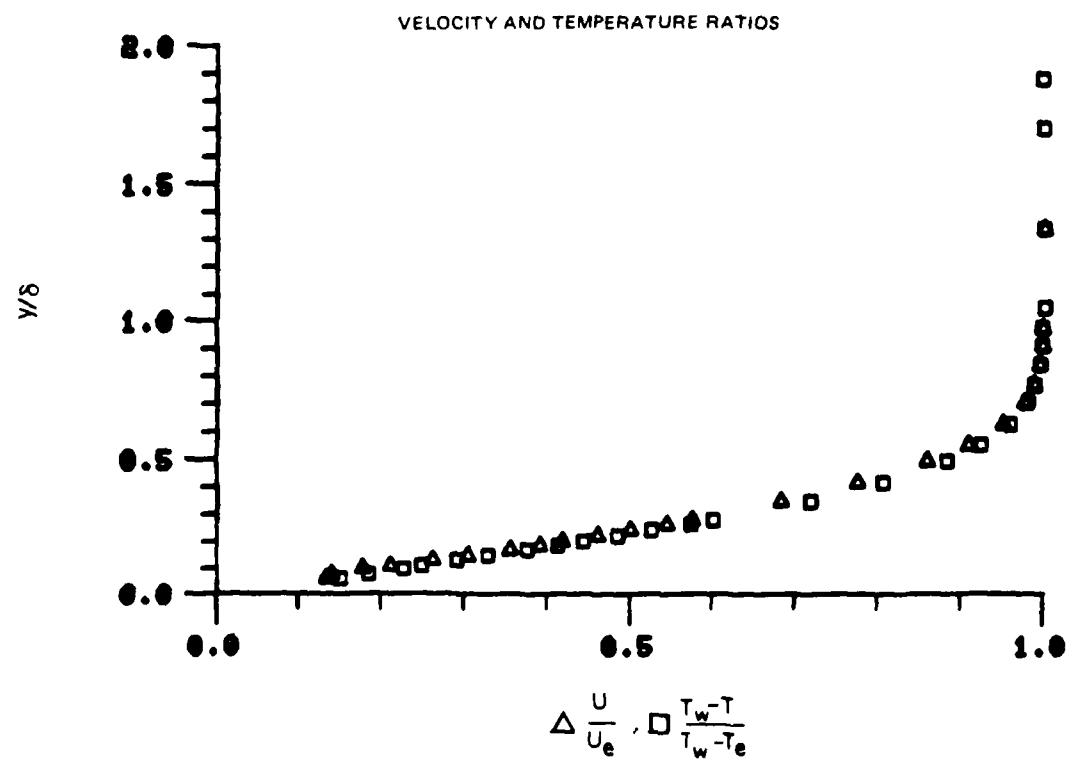


Figure 2. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 2

78-12-100-1

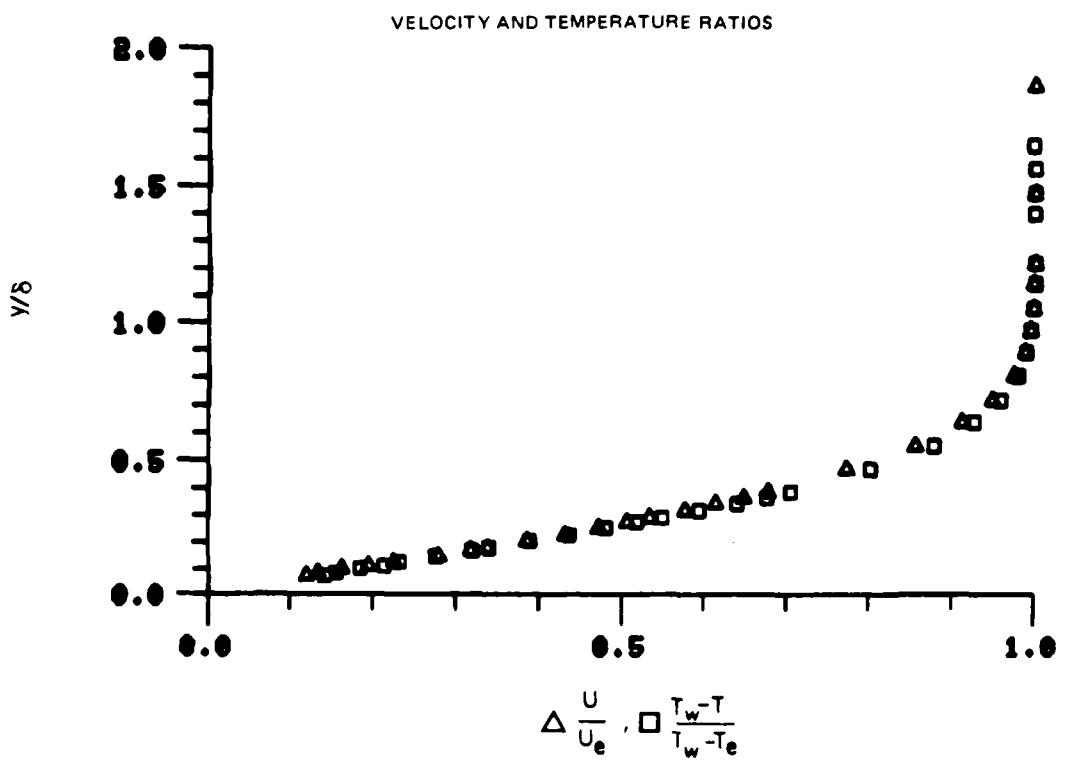


Figure 3. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 3

78-12-100-1

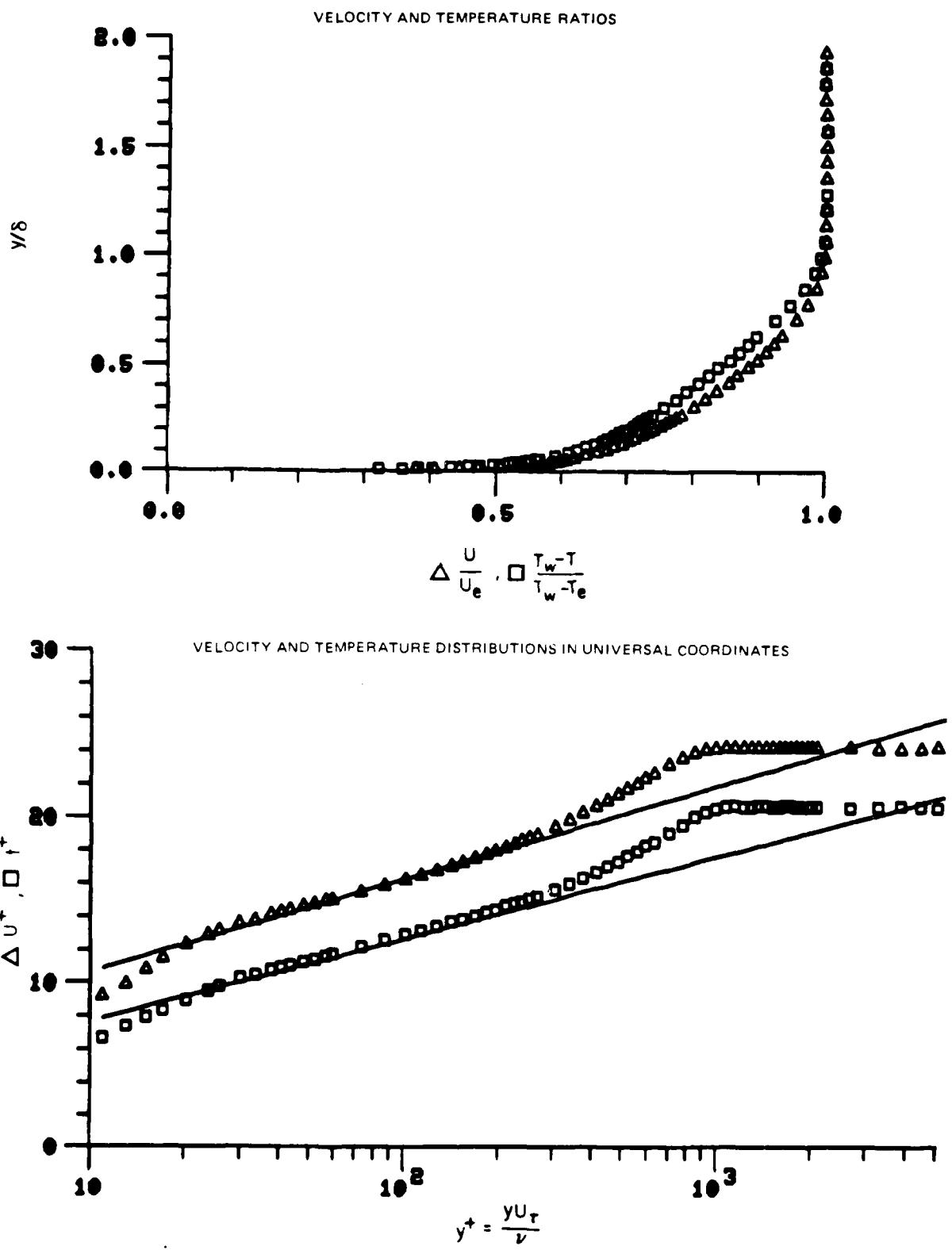


Figure 4. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 4

78-12-100-1

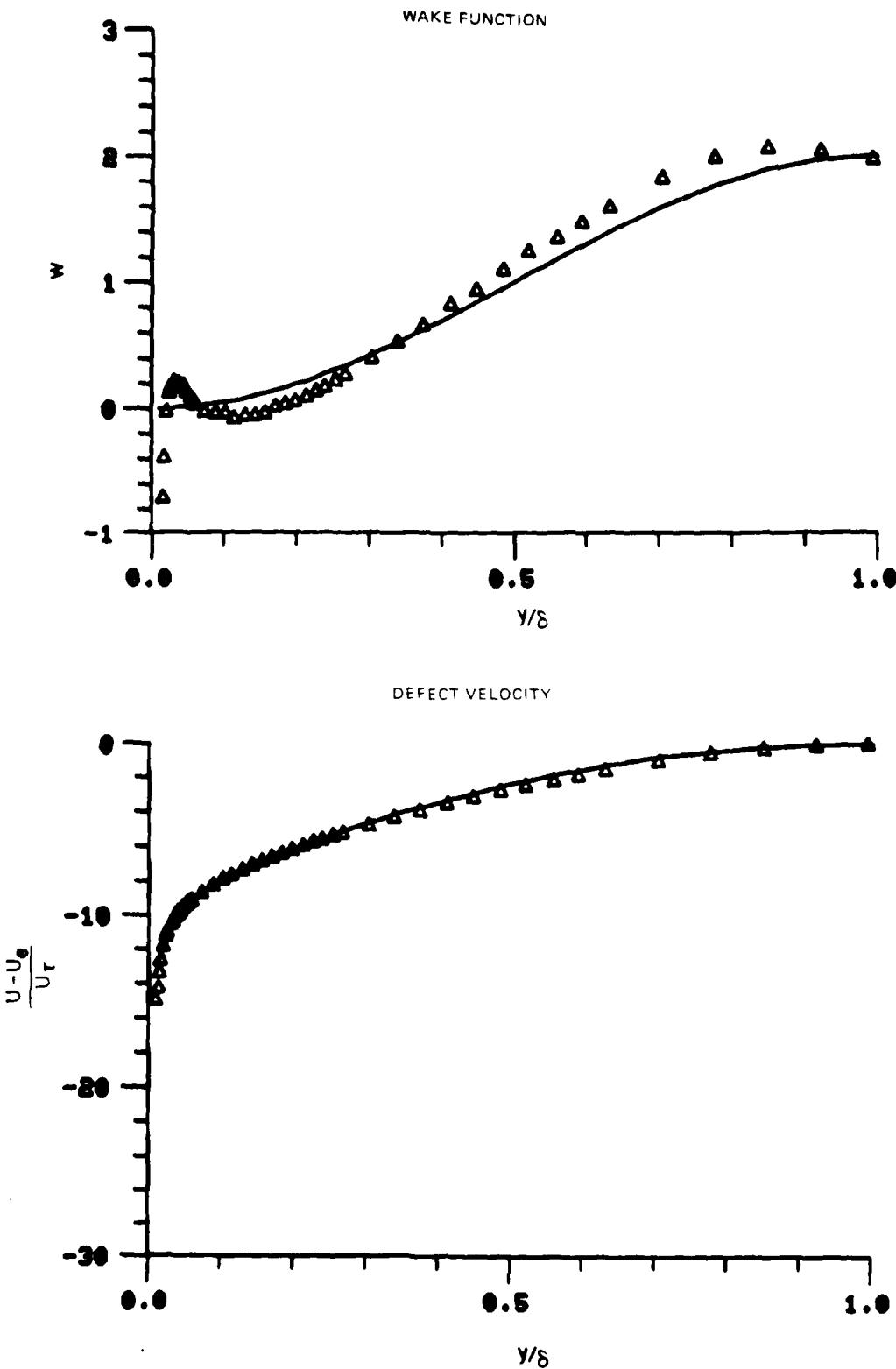


Figure 4. Boundary Layer Velocity Profiles
Run No. 5 Point No. 4

78-12-100-2

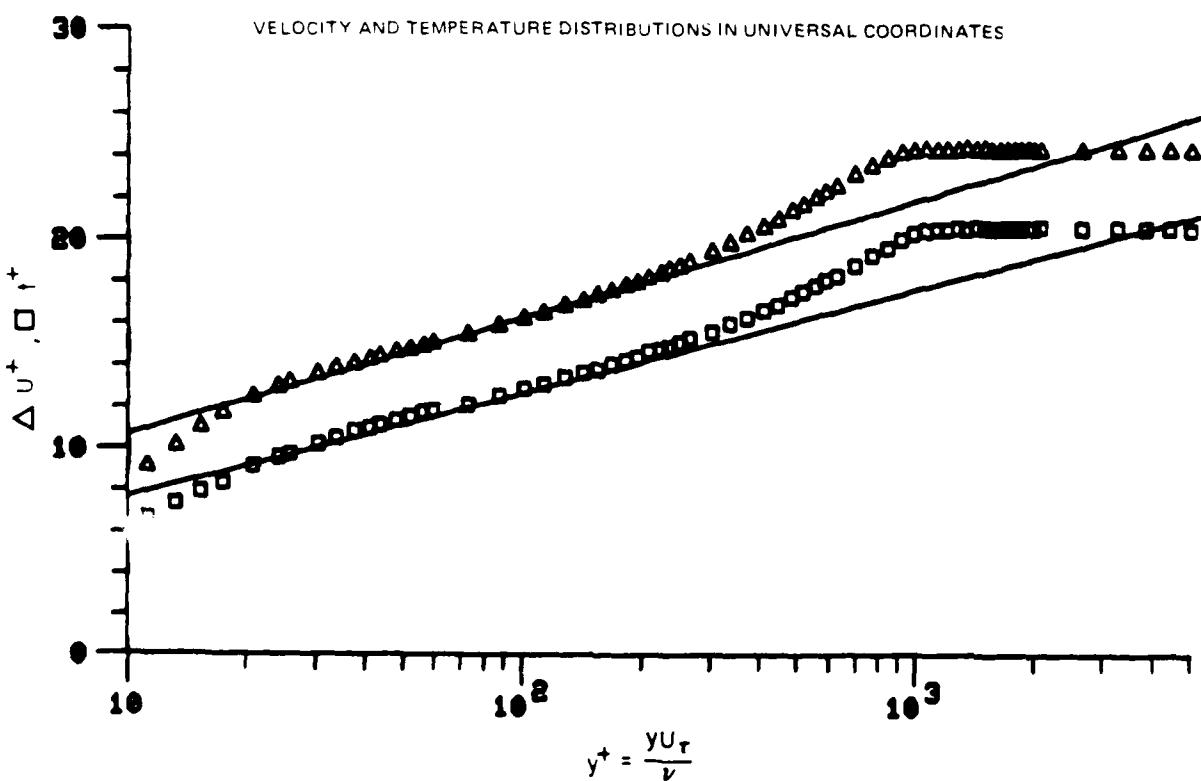
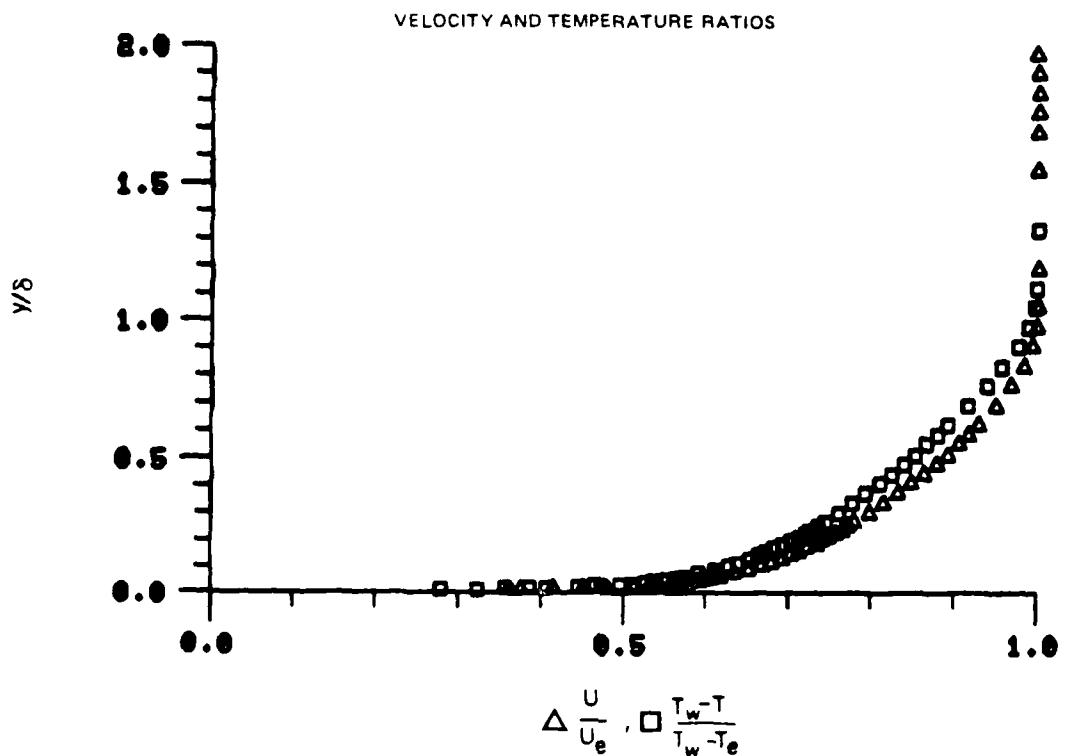


Figure 5. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 5

78-12-100-1

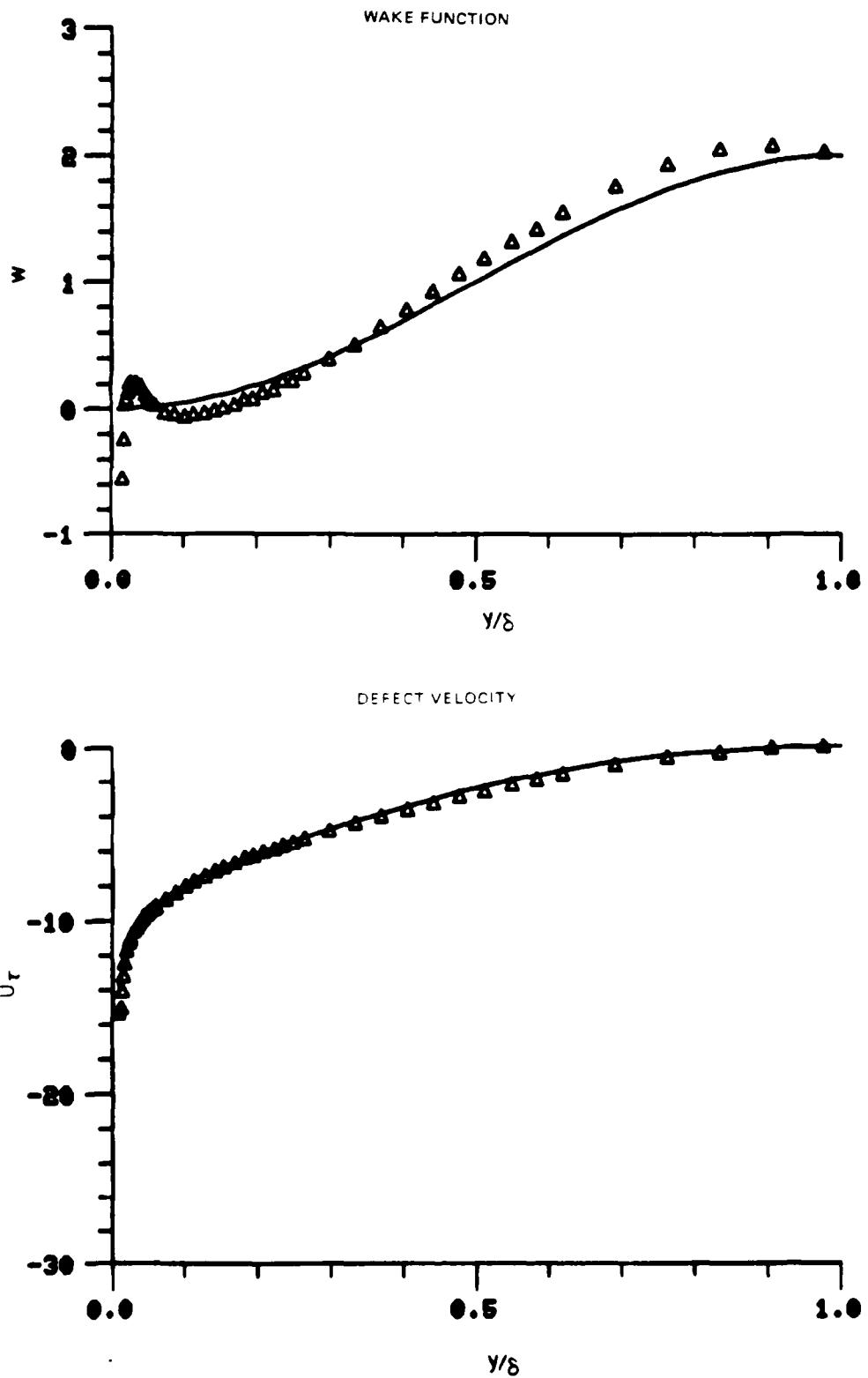


Figure 5. Boundary Layer Velocity Profiles
Run No. 5 Point No. 5

78-12-100-2

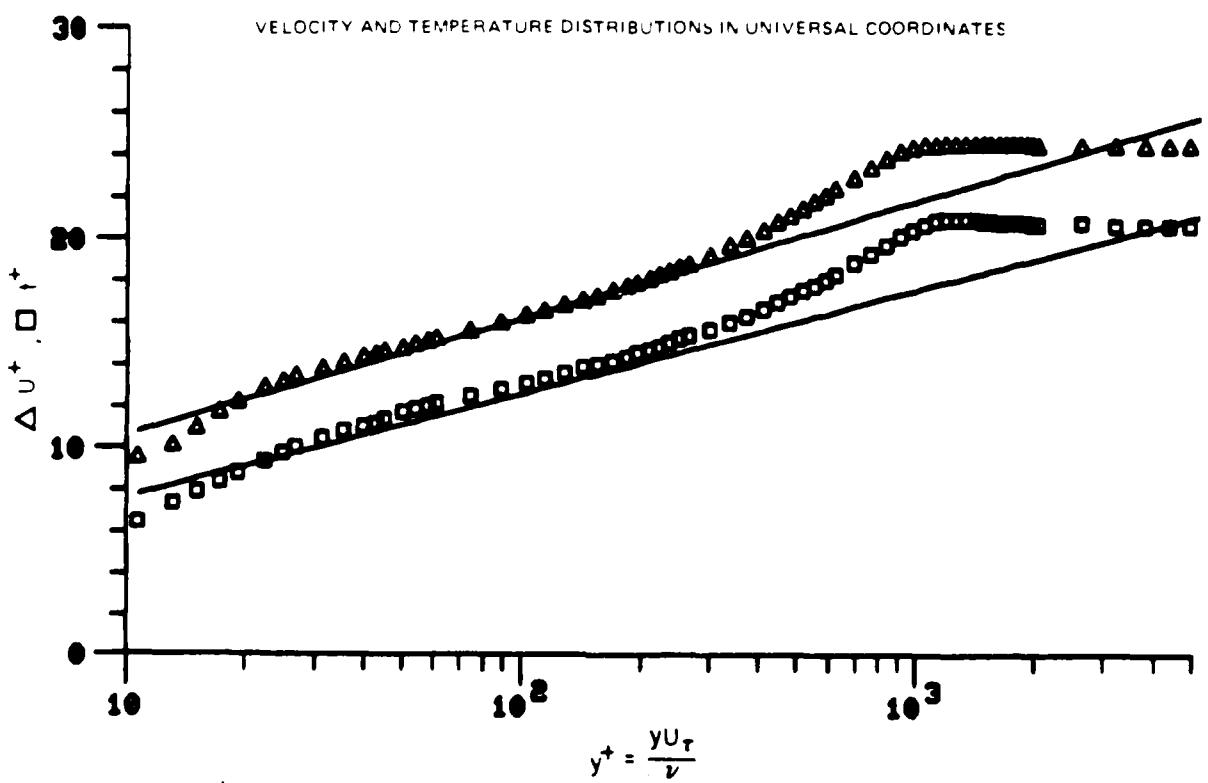
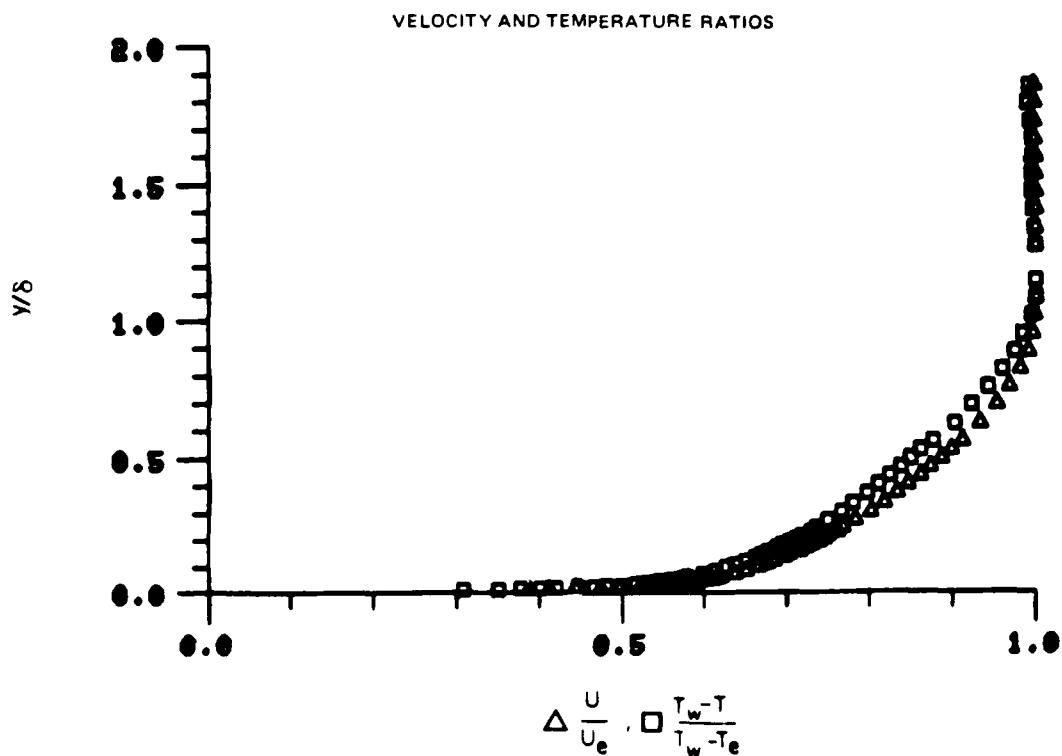


Figure 6. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 7

78-12-100-1

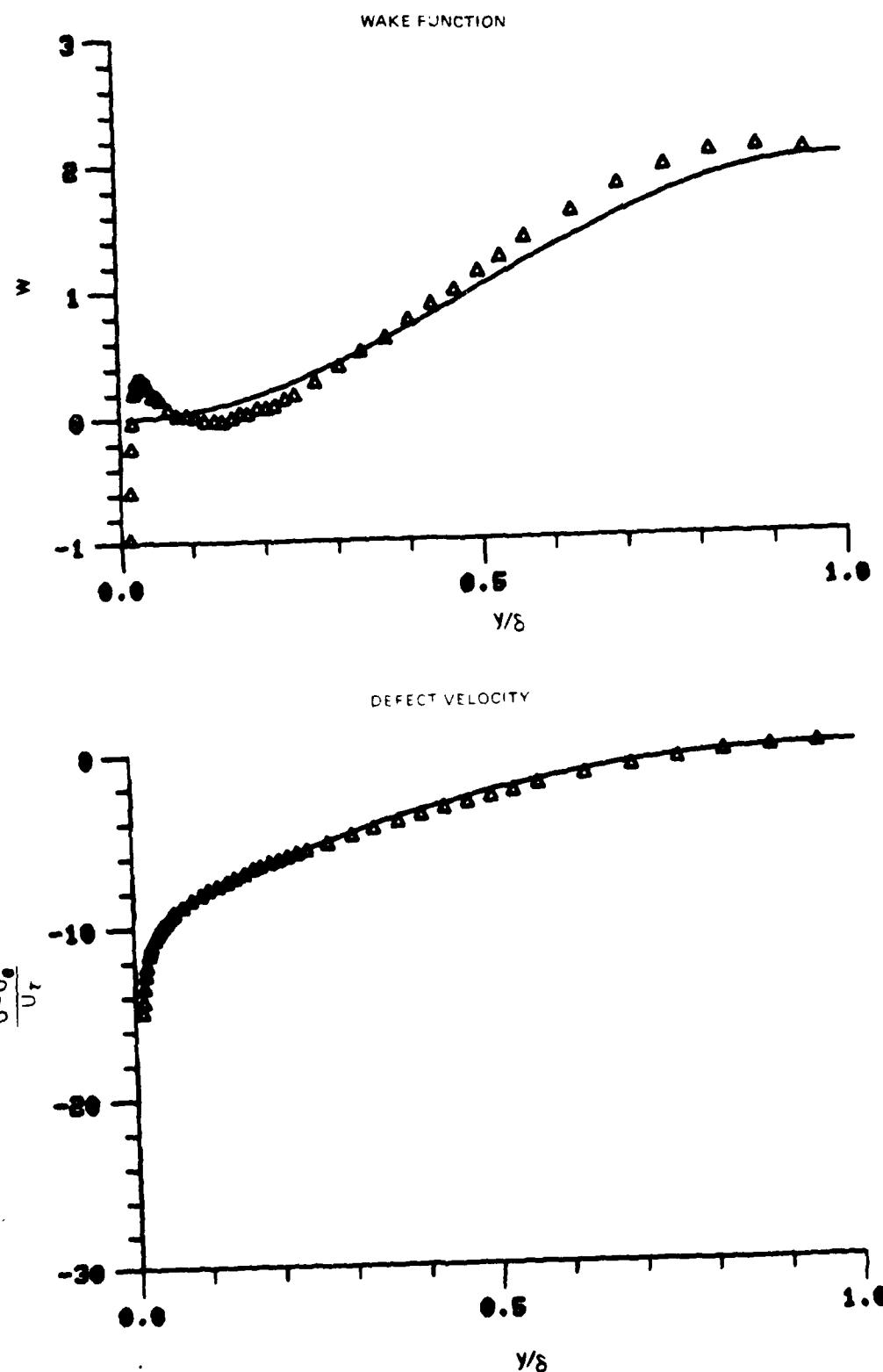


Figure 6. Boundary Layer Velocity Profiles
Run No. 5 Point No. 7

78-12-100-2

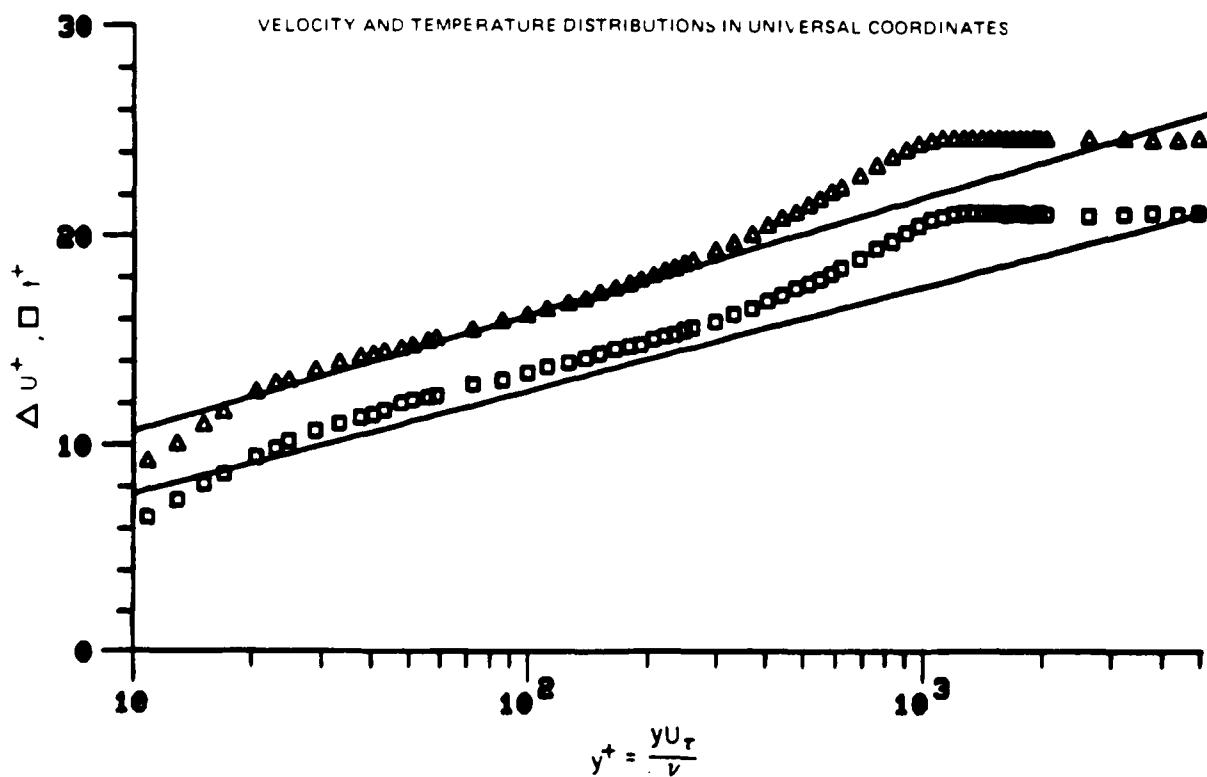
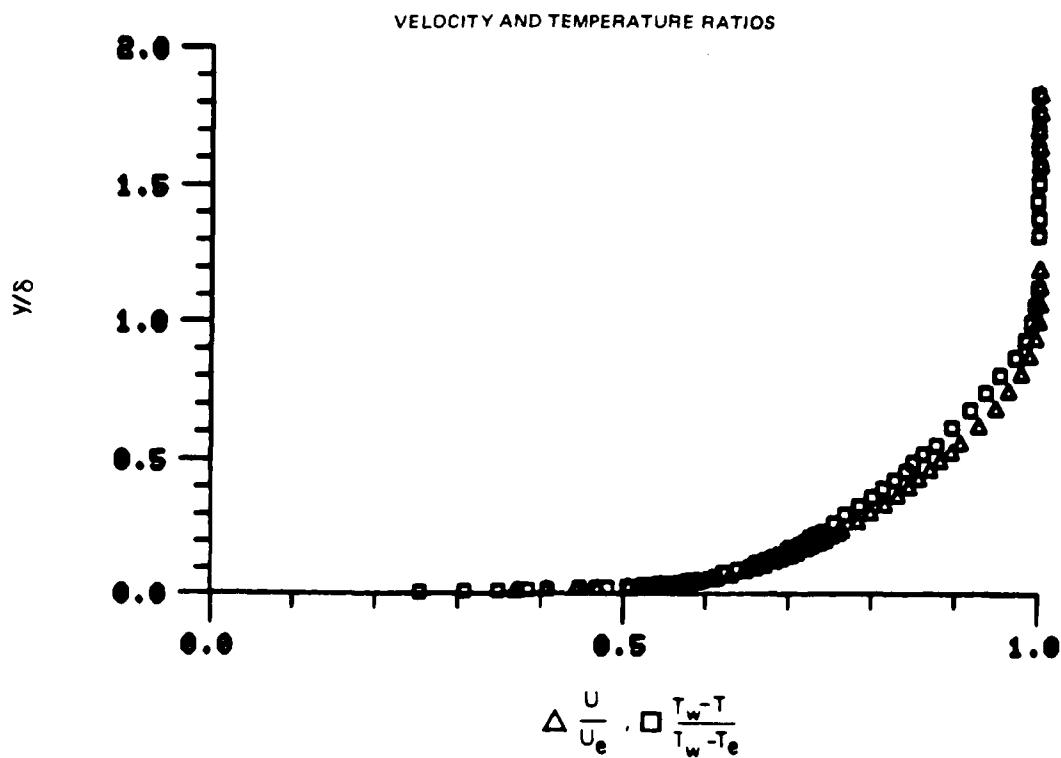


Figure 7. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 8

78-12-100-1

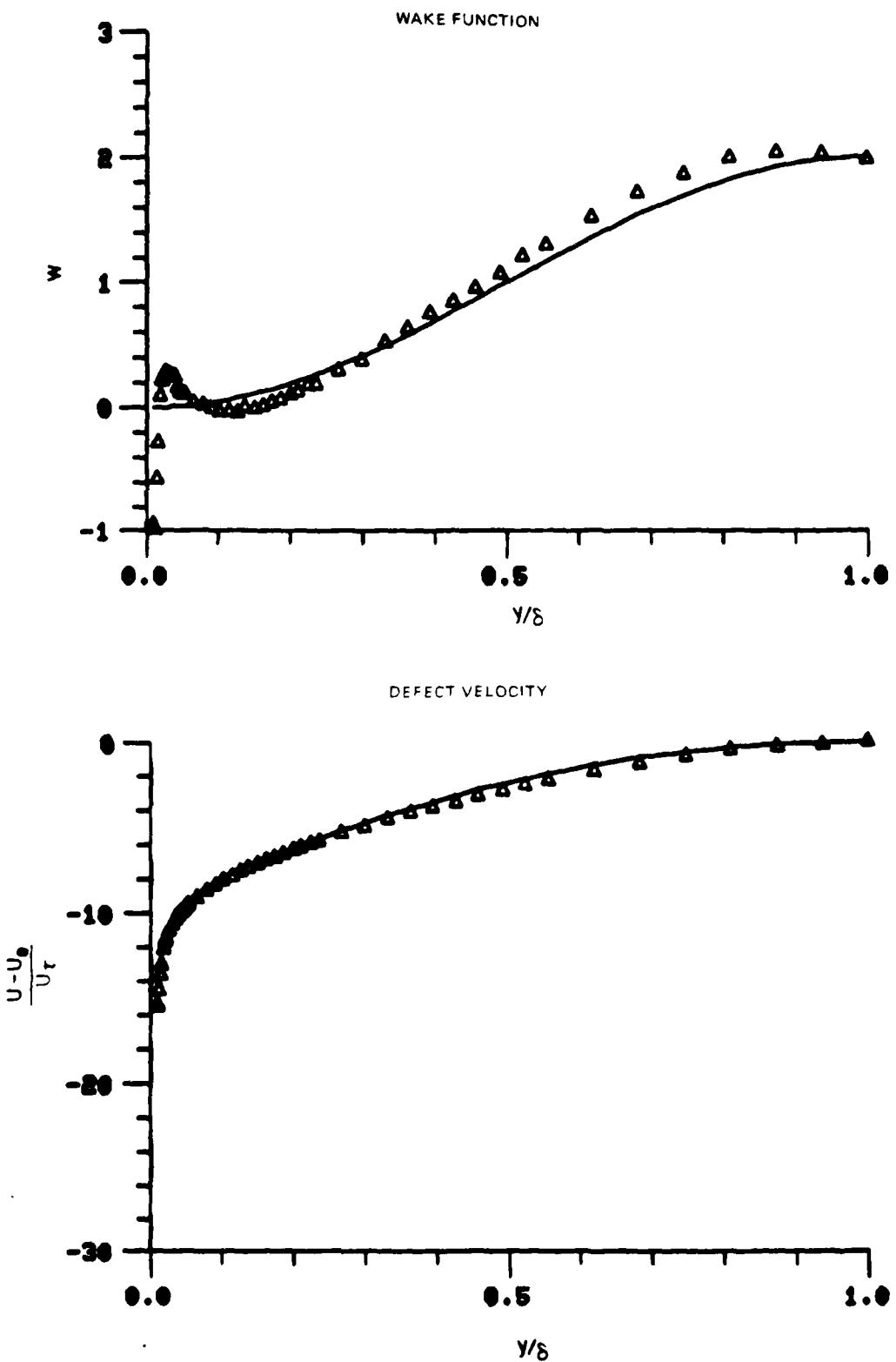


Figure 7. Boundary Layer Velocity Profiles
Run No. 5 Point No. 8

78-12-100-2

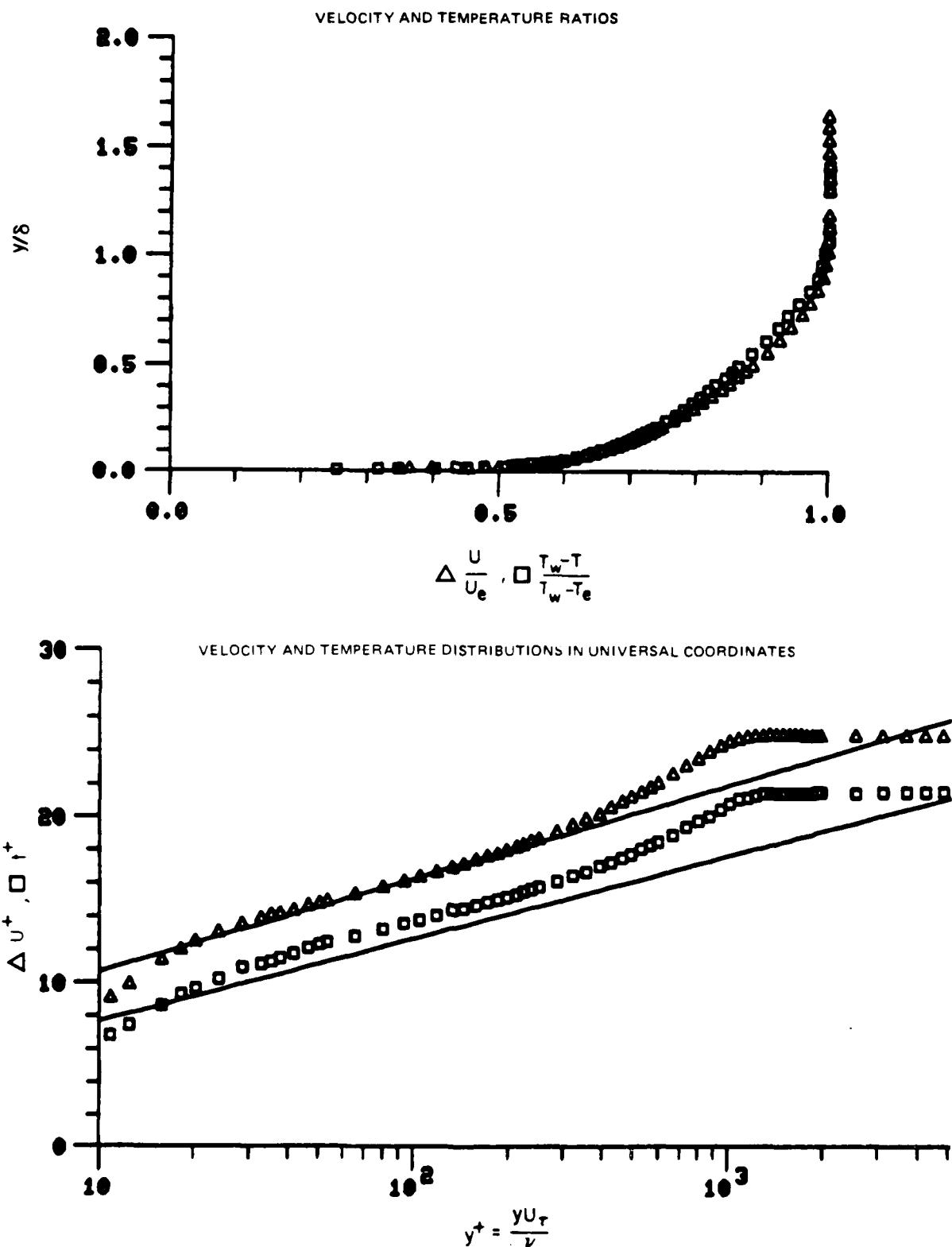


Figure 8. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 11

78-12-100-1

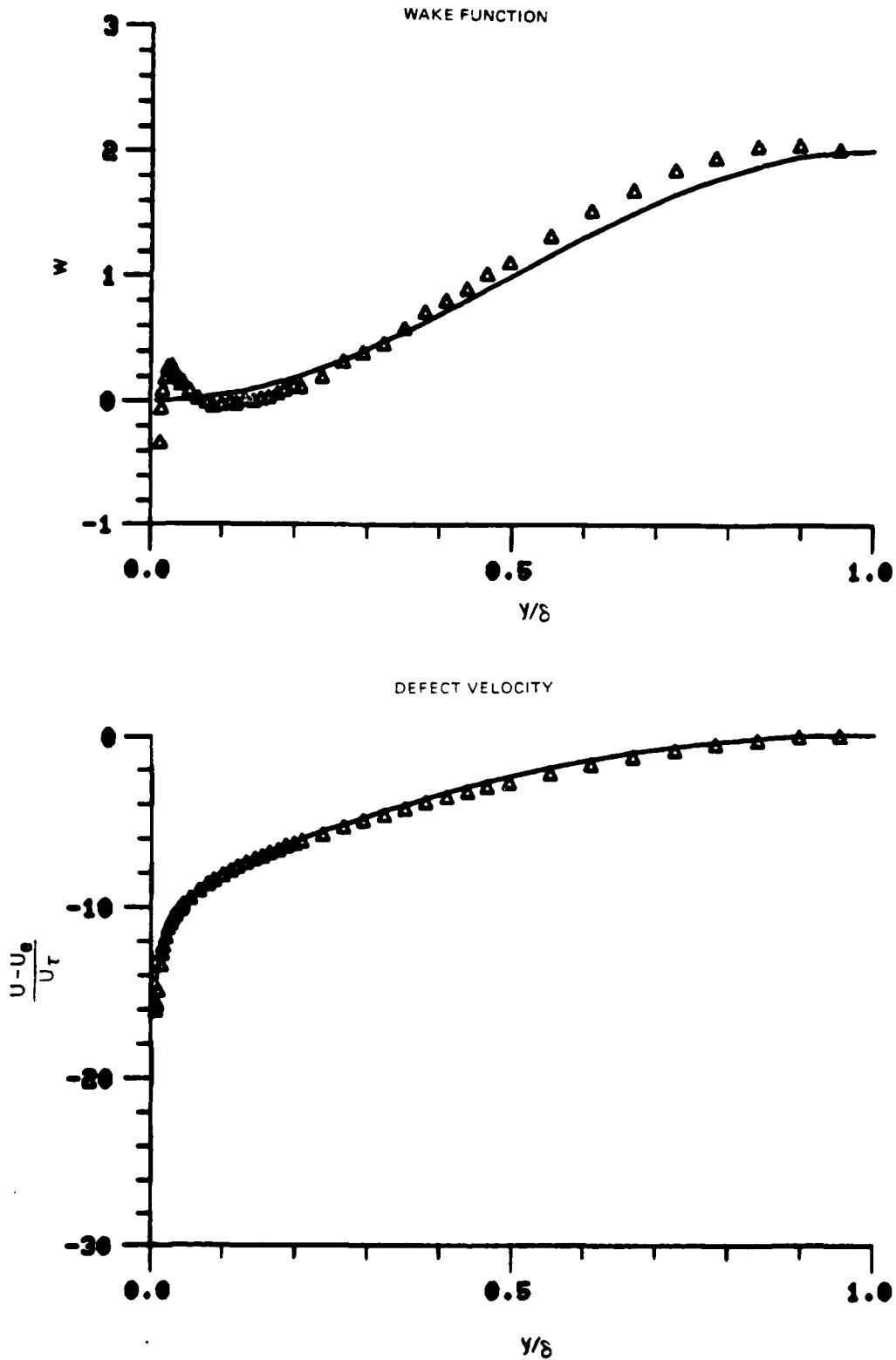
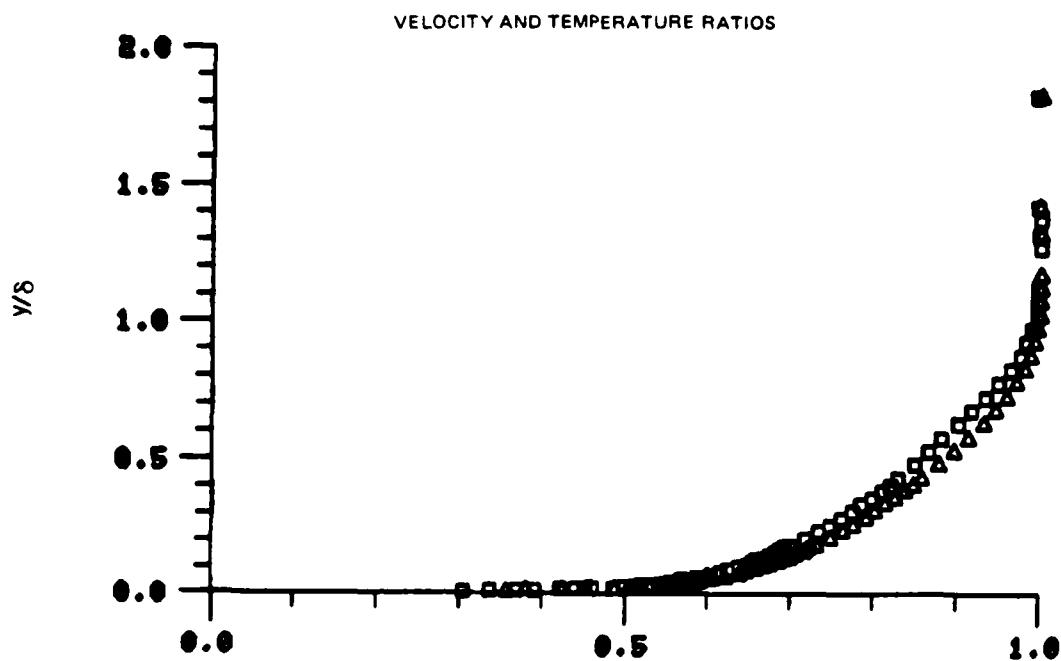
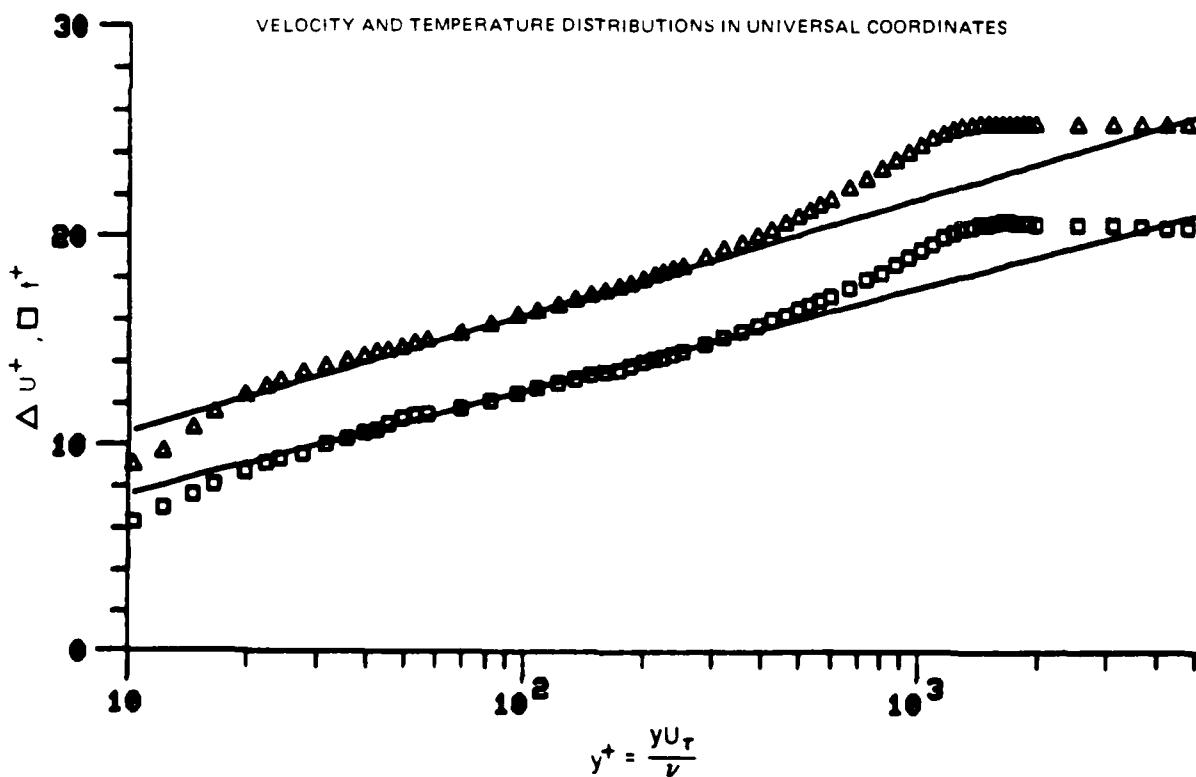


Figure 8. Boundary Layer Velocity Profiles
Run No. 5 Point No. 11

78-12-100-2



$$\Delta \frac{U}{U_e}, \square \frac{T_w - T}{T_w - T_e}$$



$$y^+ = \frac{y U_\tau}{\nu}$$

Figure 9. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 13

78-12-100-1

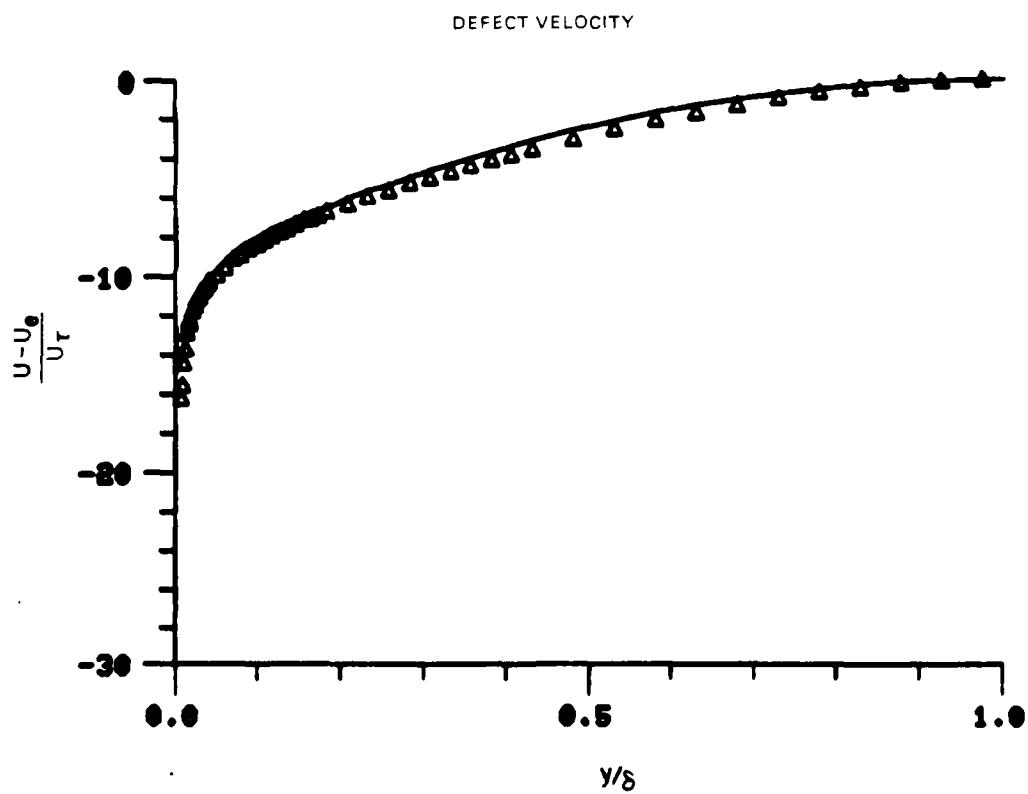
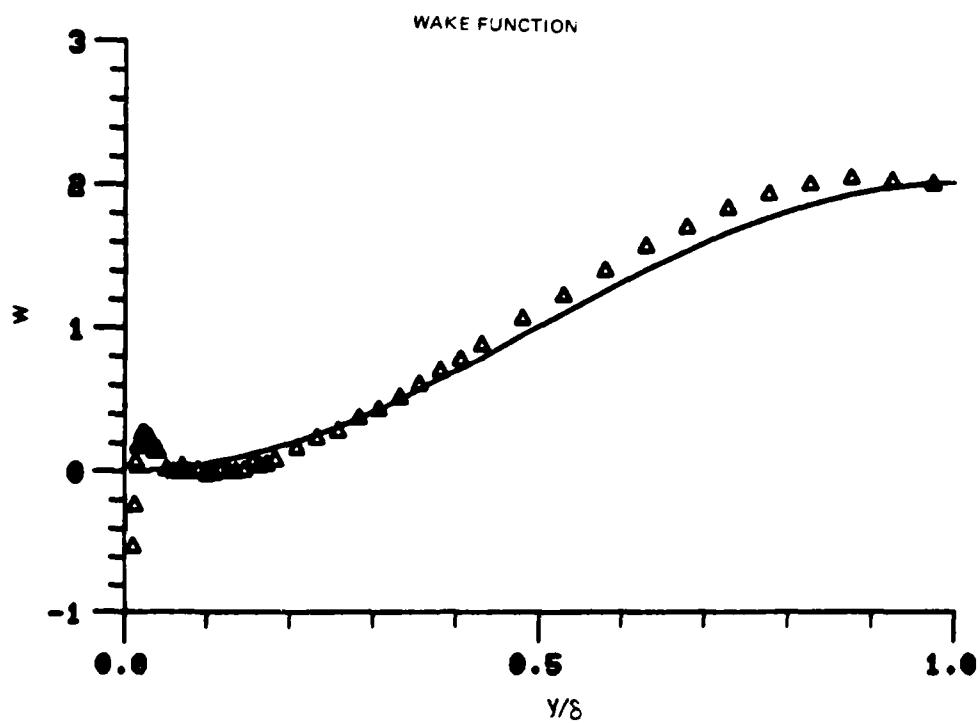


Figure 9. Boundary Layer Velocity Profiles
Run No. 5 Point No. 13

78-12-100-2

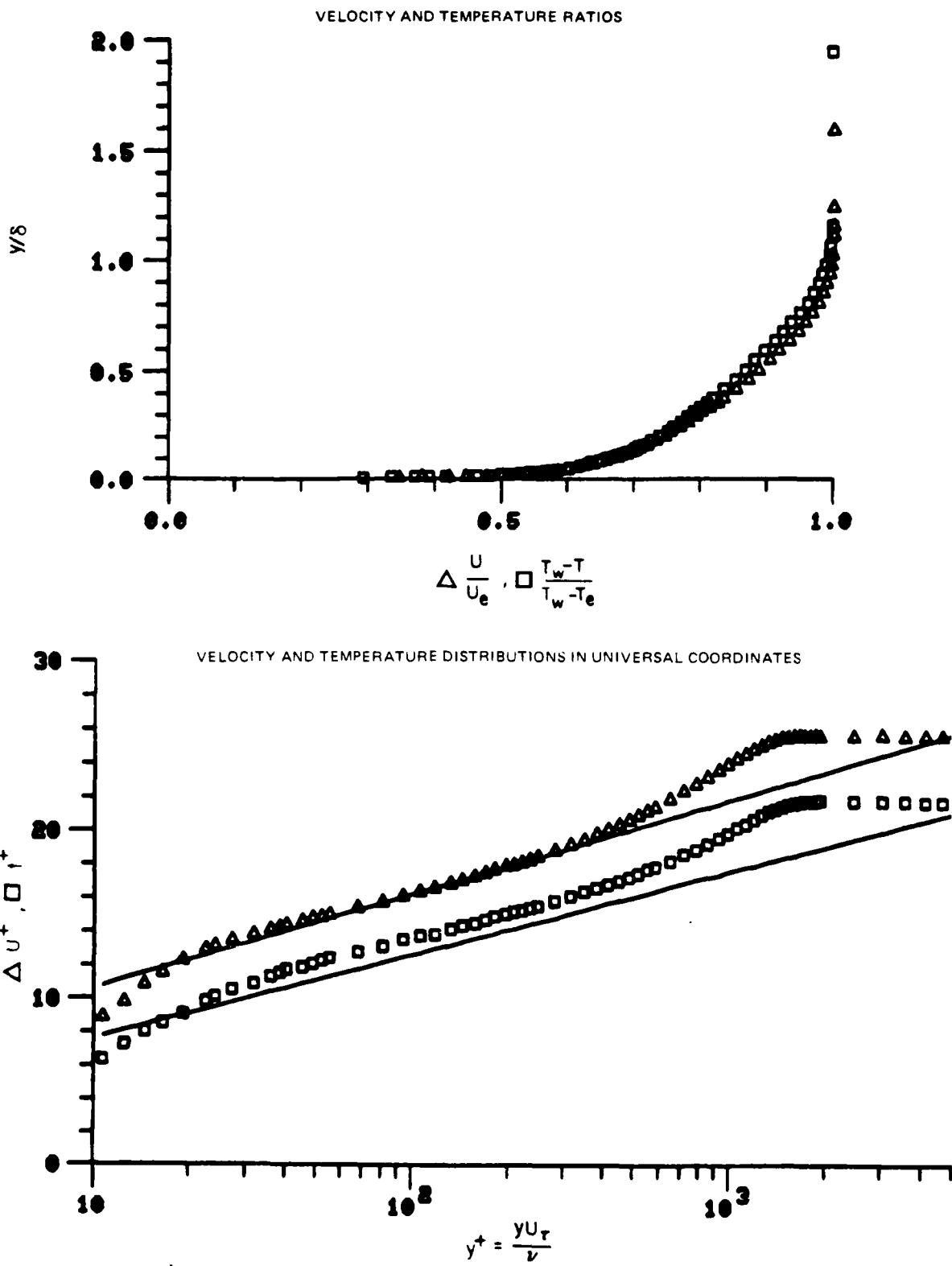


Figure 10. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 14

78-12-100-1

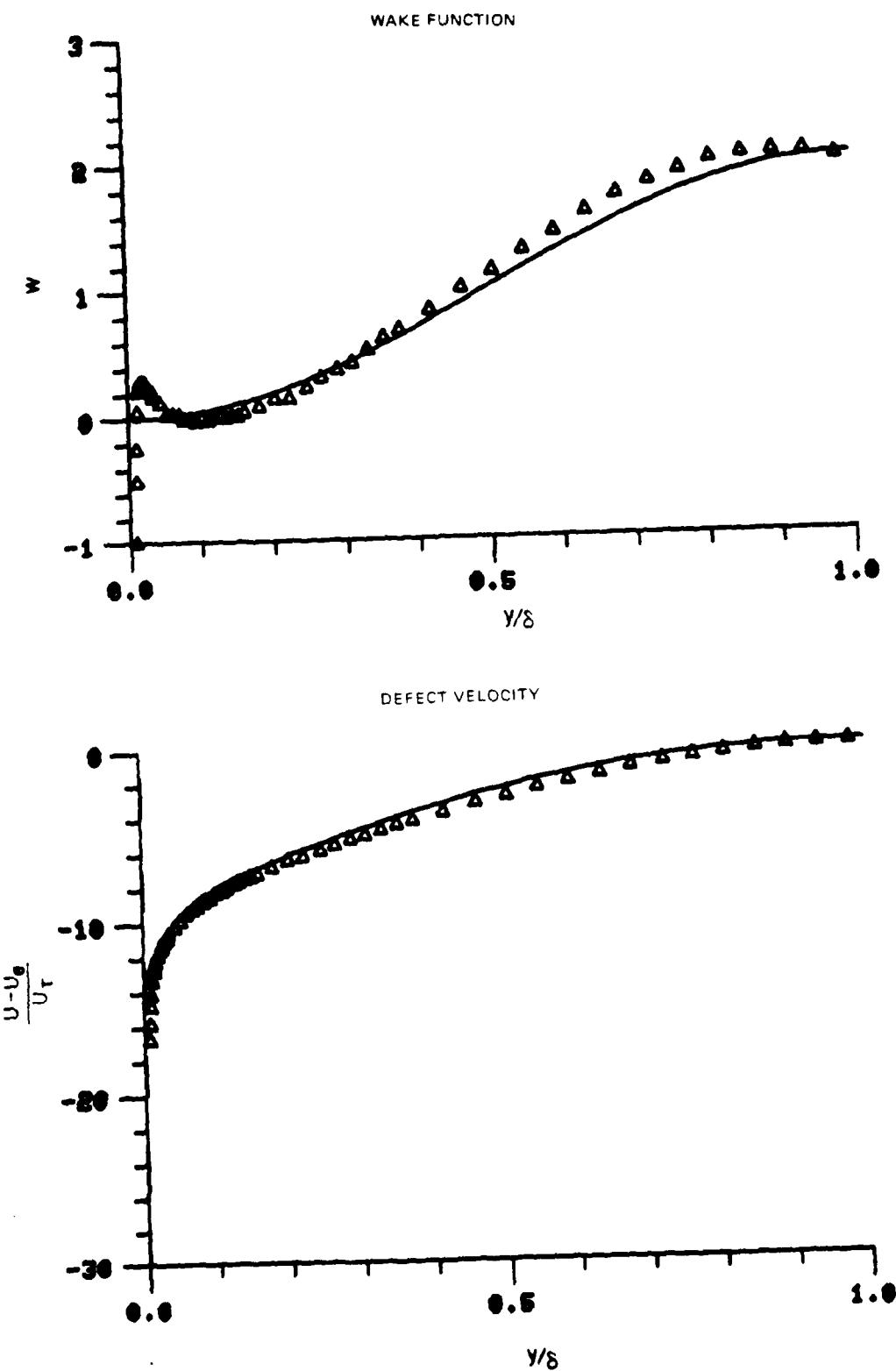


Figure 10. Boundary Layer Velocity Profiles
Run No. 5 Point No. 14

78-12-100-2

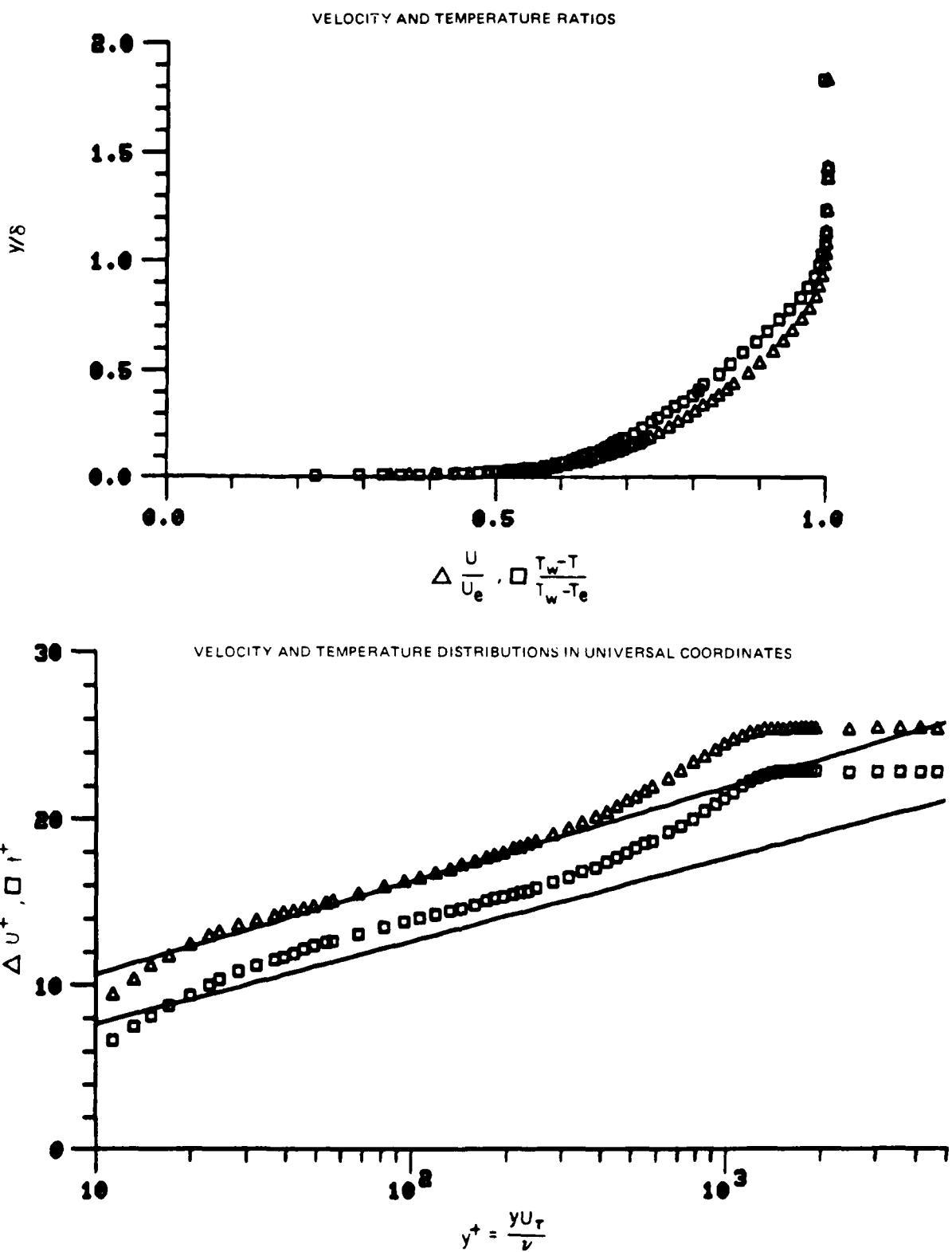


Figure 11. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 16

78-12-100-1

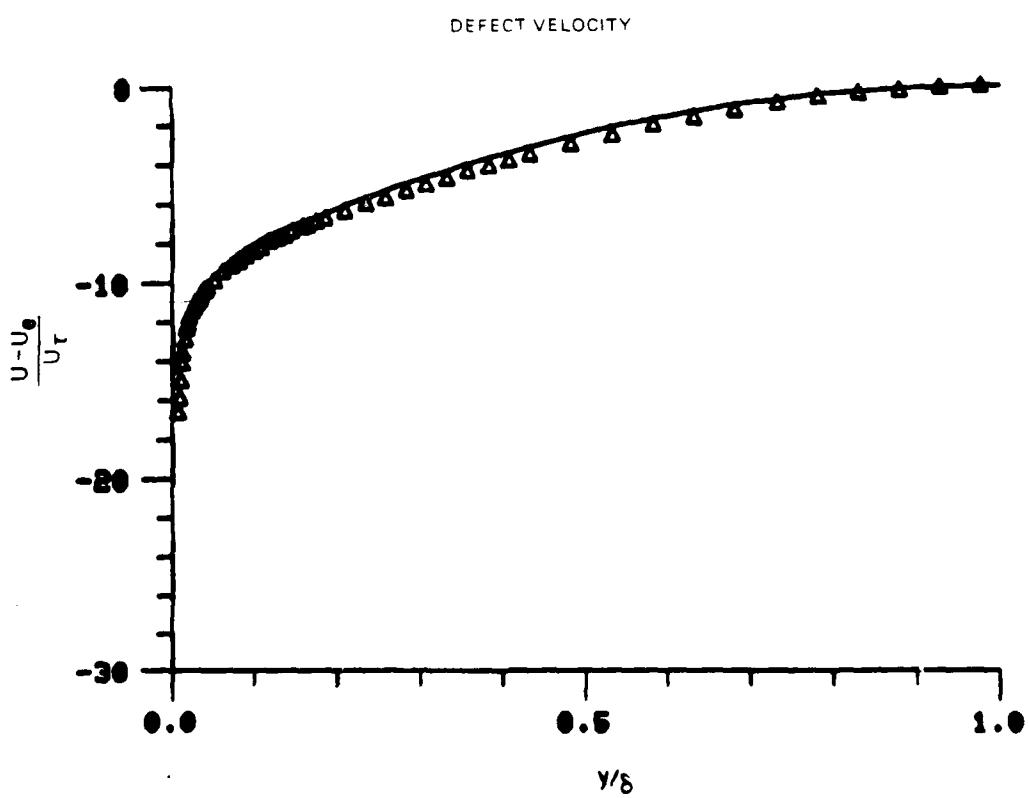
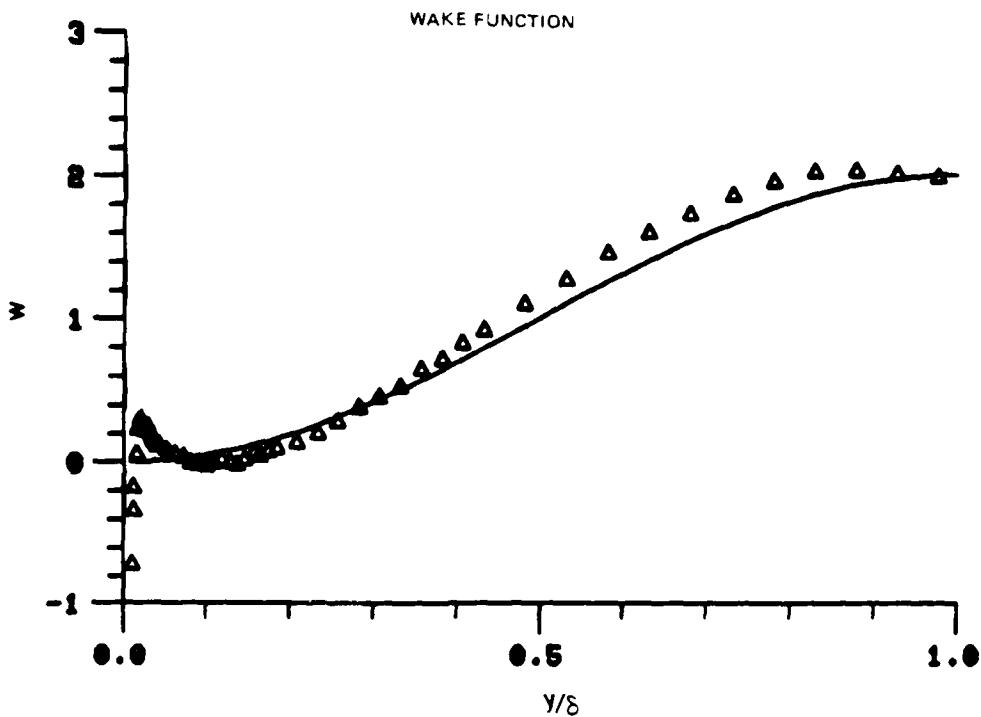


Figure 11. Boundary Layer Velocities at $y/\delta = 1.0$
Part 2 of Figure 10

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DATA REPORT, VOLUME I, VELOCITY AND TEMPERATURE PROFILE DATA FO-ETC(1)
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UNCLASSIFIED UTRC/R81-914388-15 AFOSR-TR-81-0516 NL

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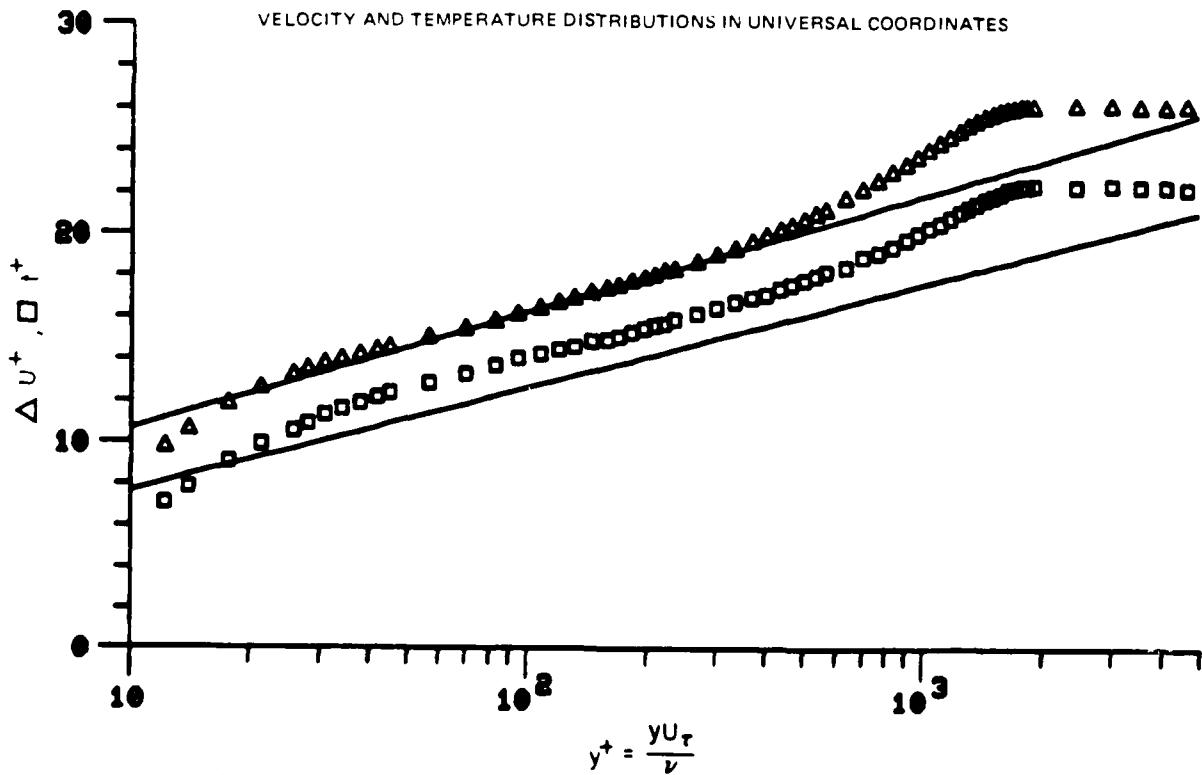
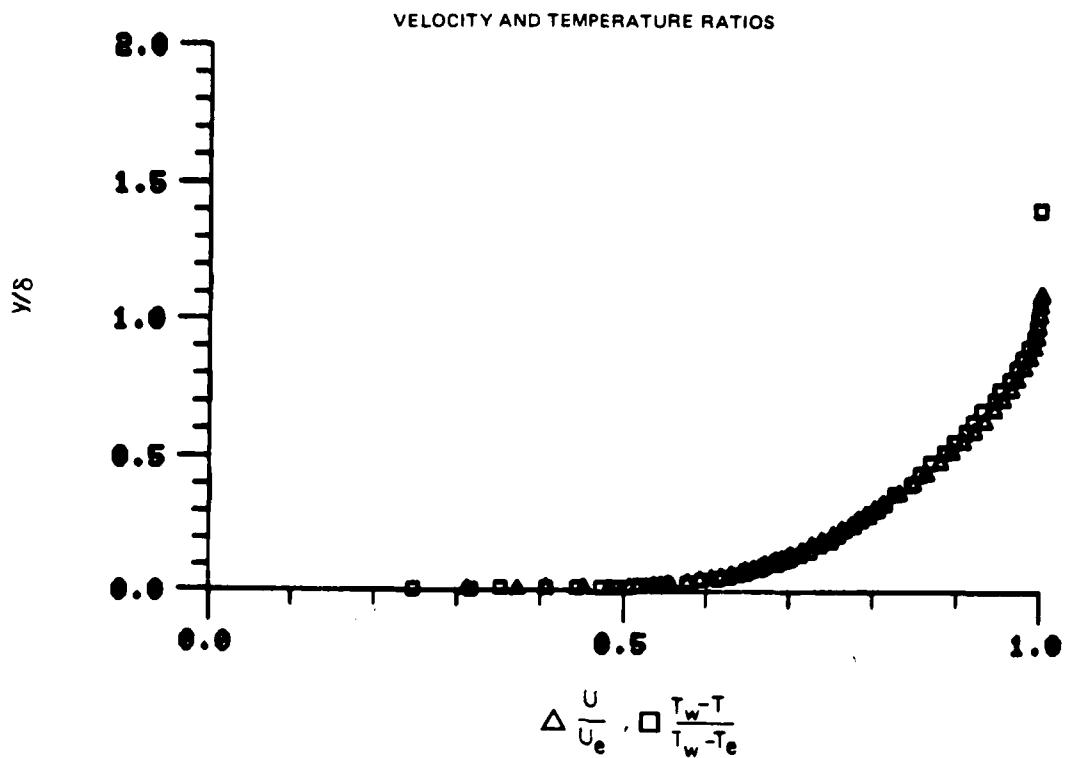


Figure 12. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 17

78-12-100-1

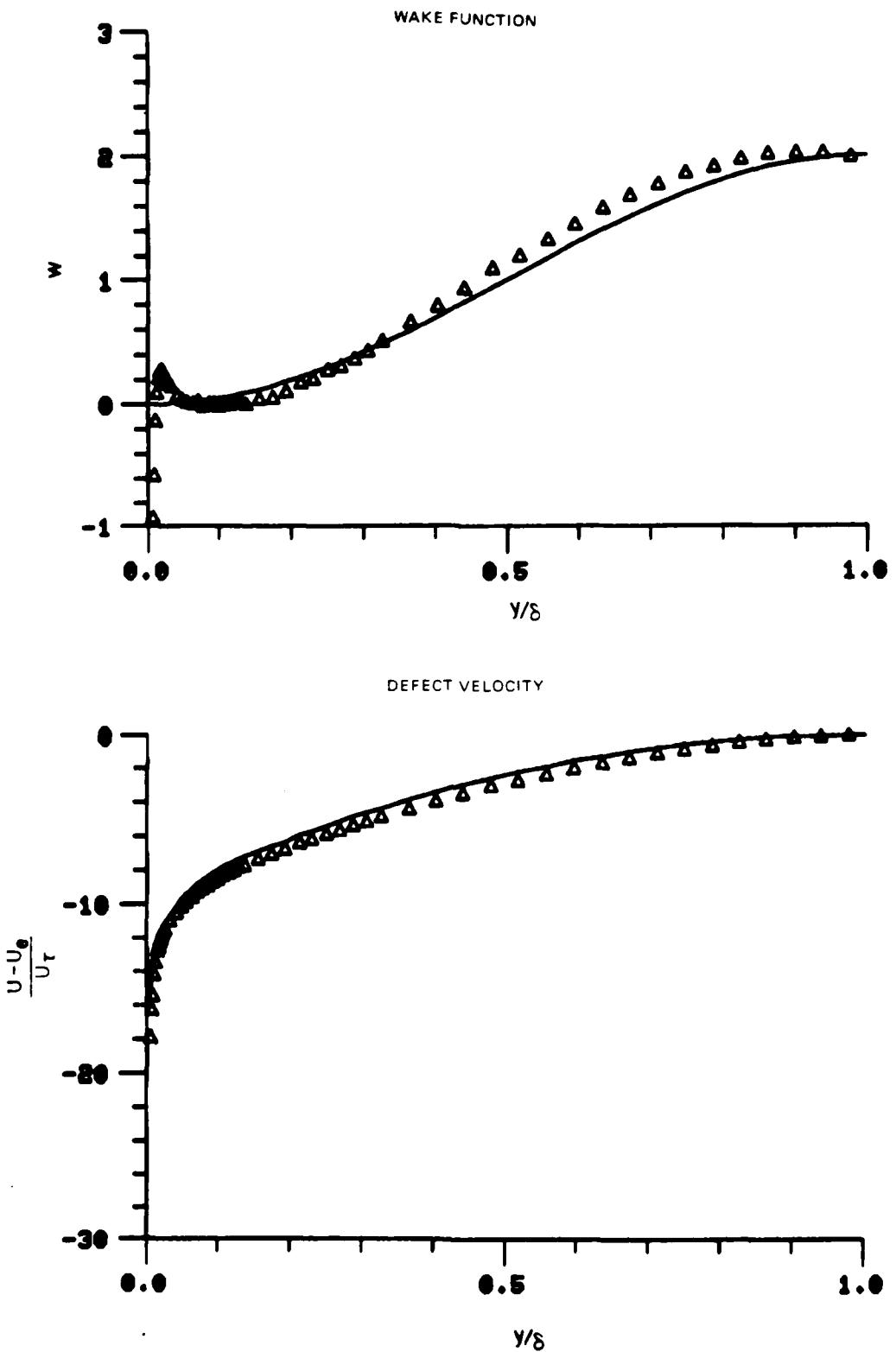


Figure 12. Boundary Layer Velocity Profiles
Run No. 5 Point No. 17

78-12-100-2

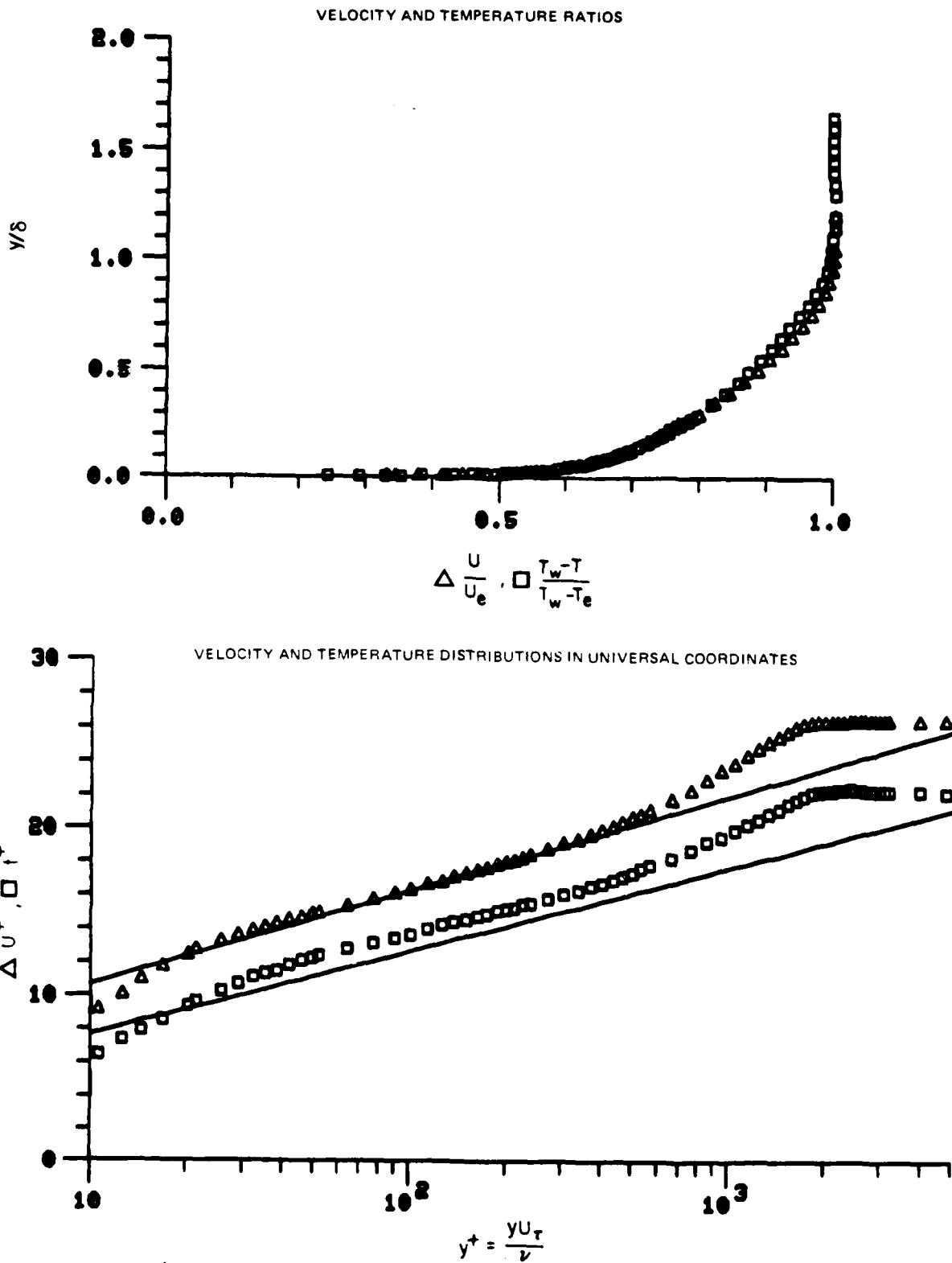


Figure 13. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 18

78-12-100-1

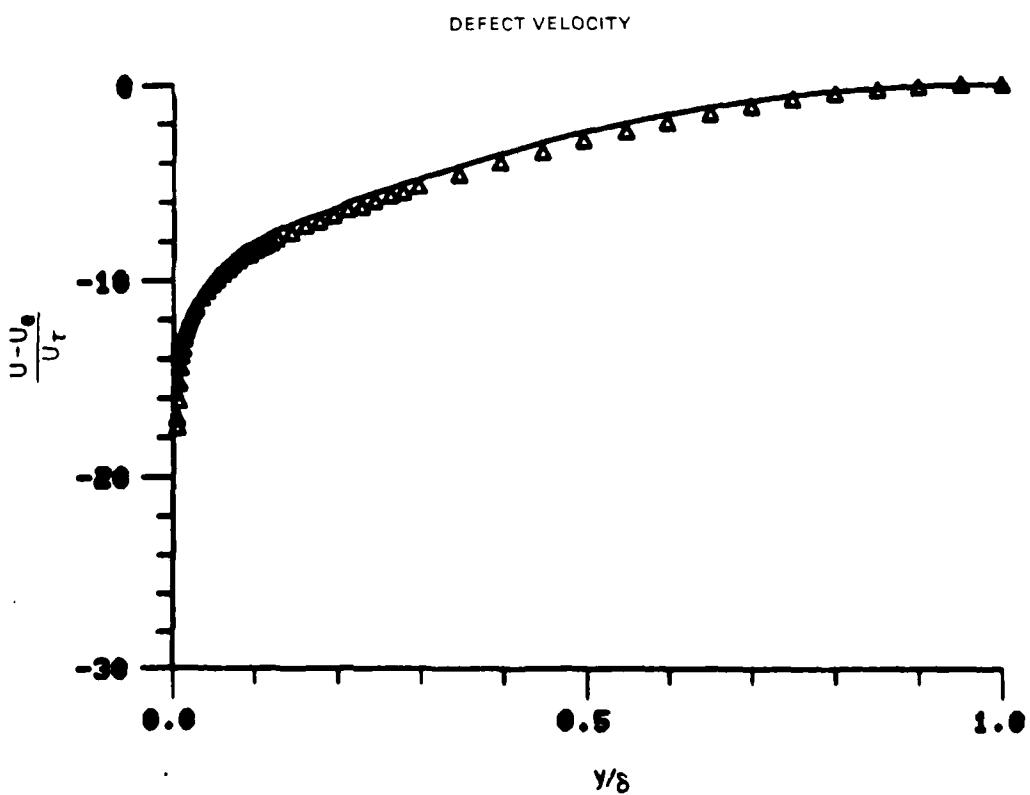
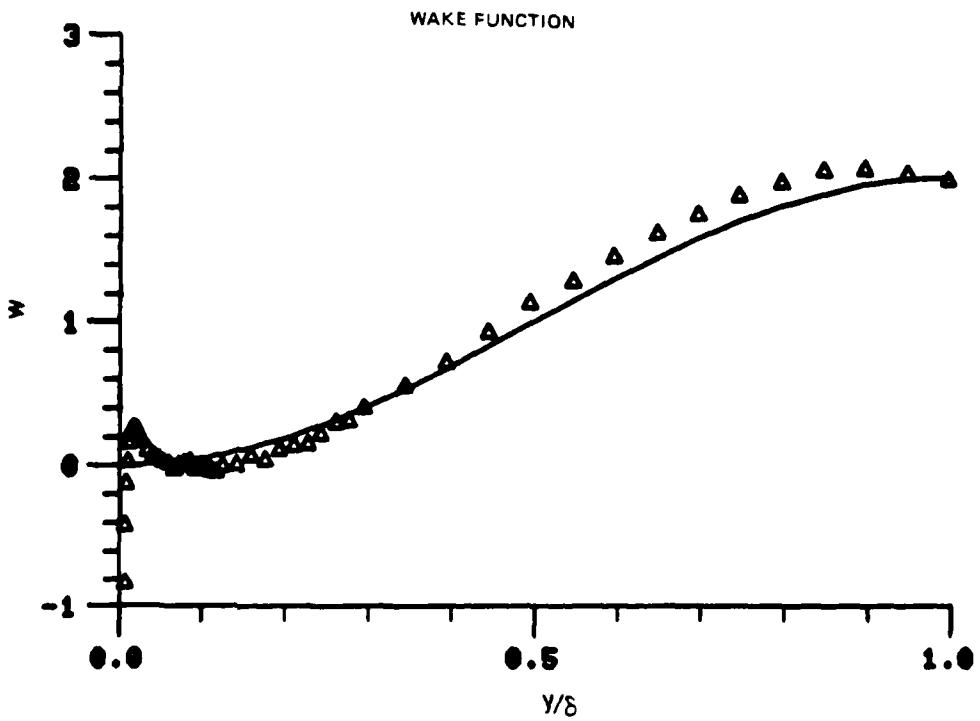


Figure 13. Boundary Layer Velocity Profiles
Run No. 5 Point No. 18

78-12-100-2

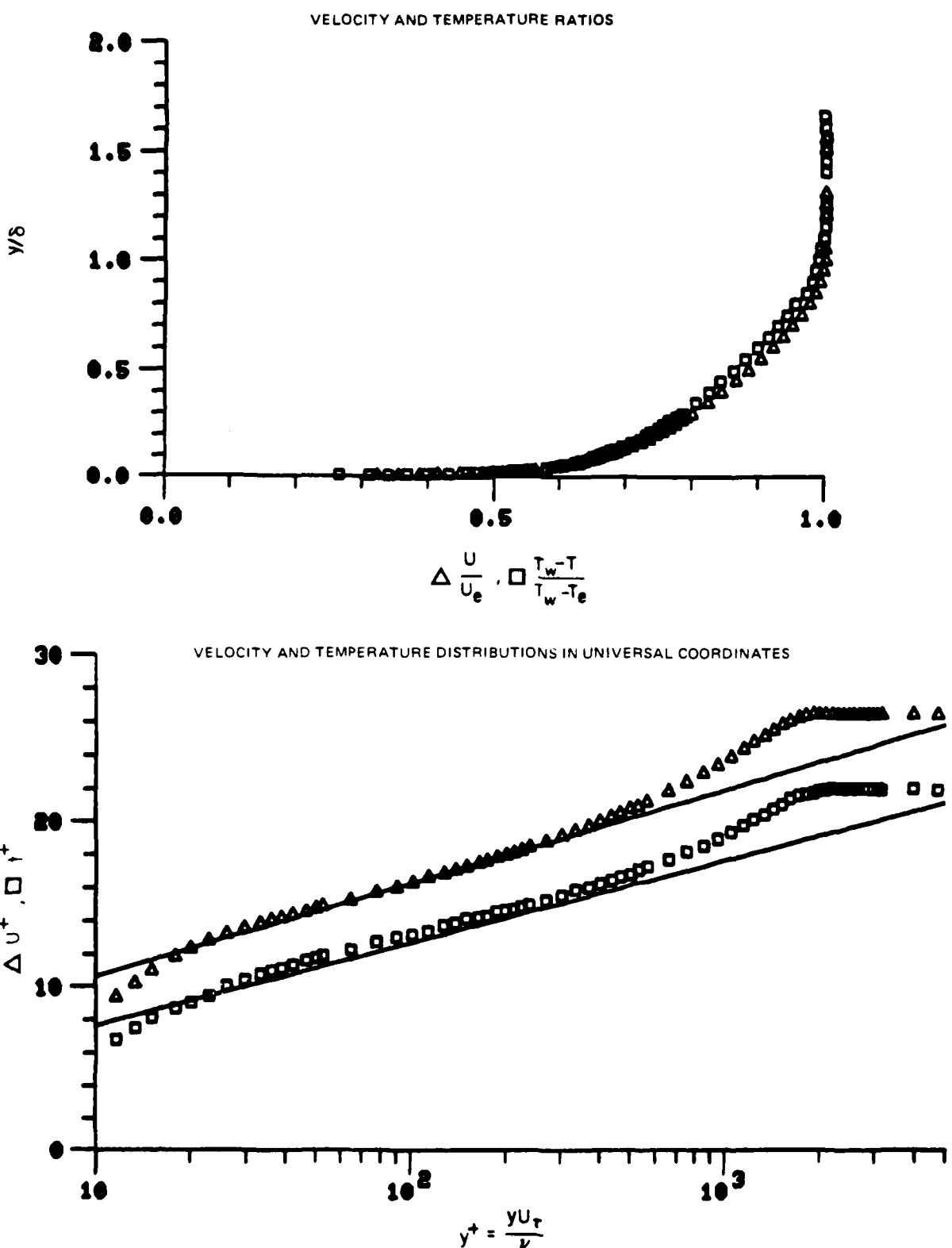


Figure 14. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 19

78-12-100-1

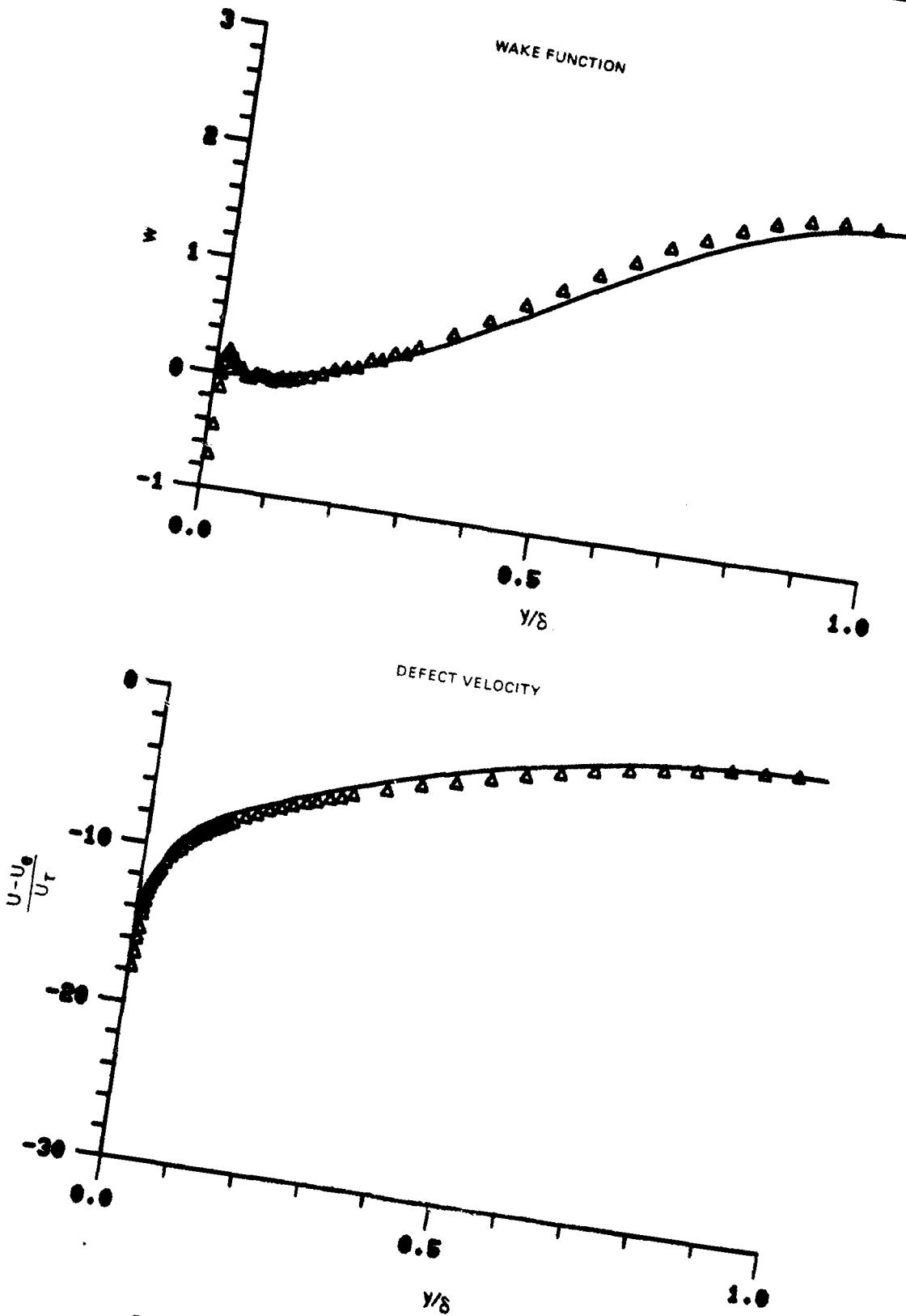


Figure 14. Boundary Layer Velocity Profiles
Run No. 5 Point No. 19

78-12-100-2

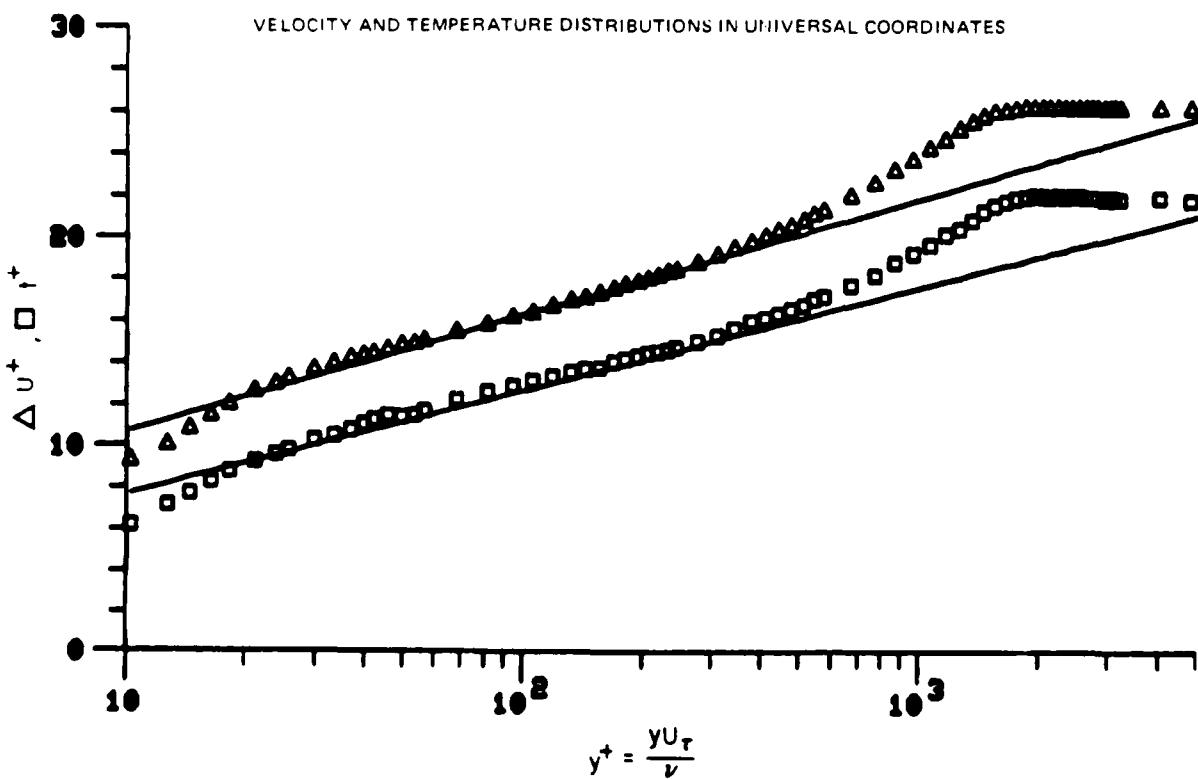
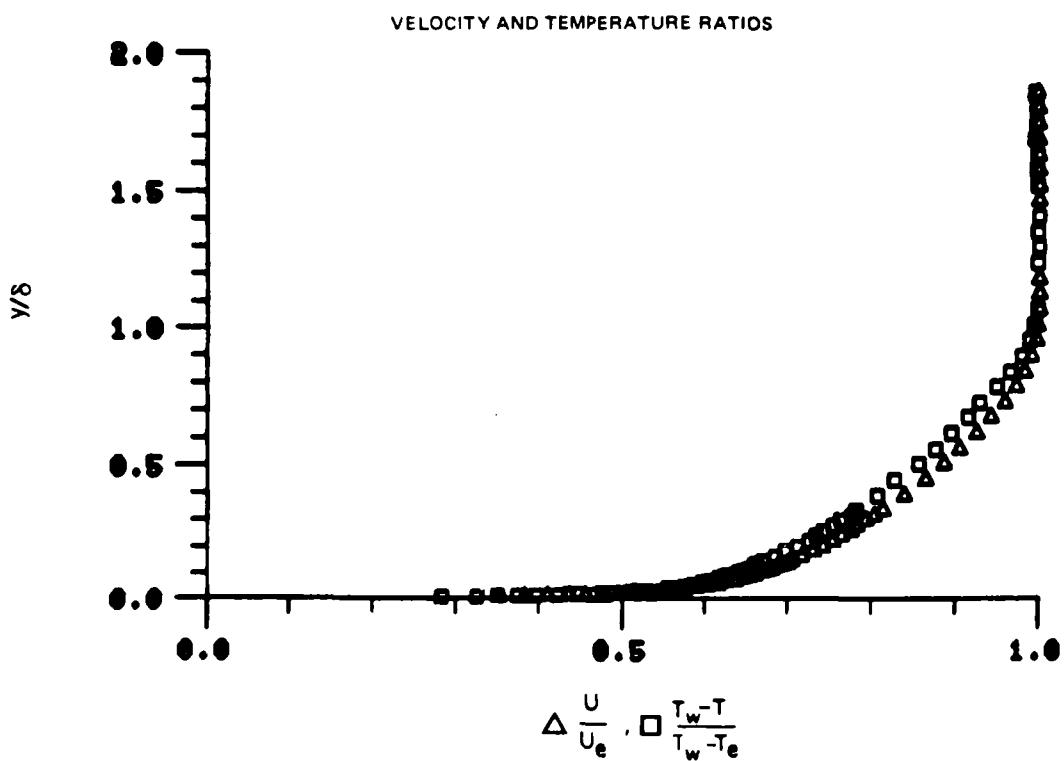


Figure 15. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 20

78-12-100-1

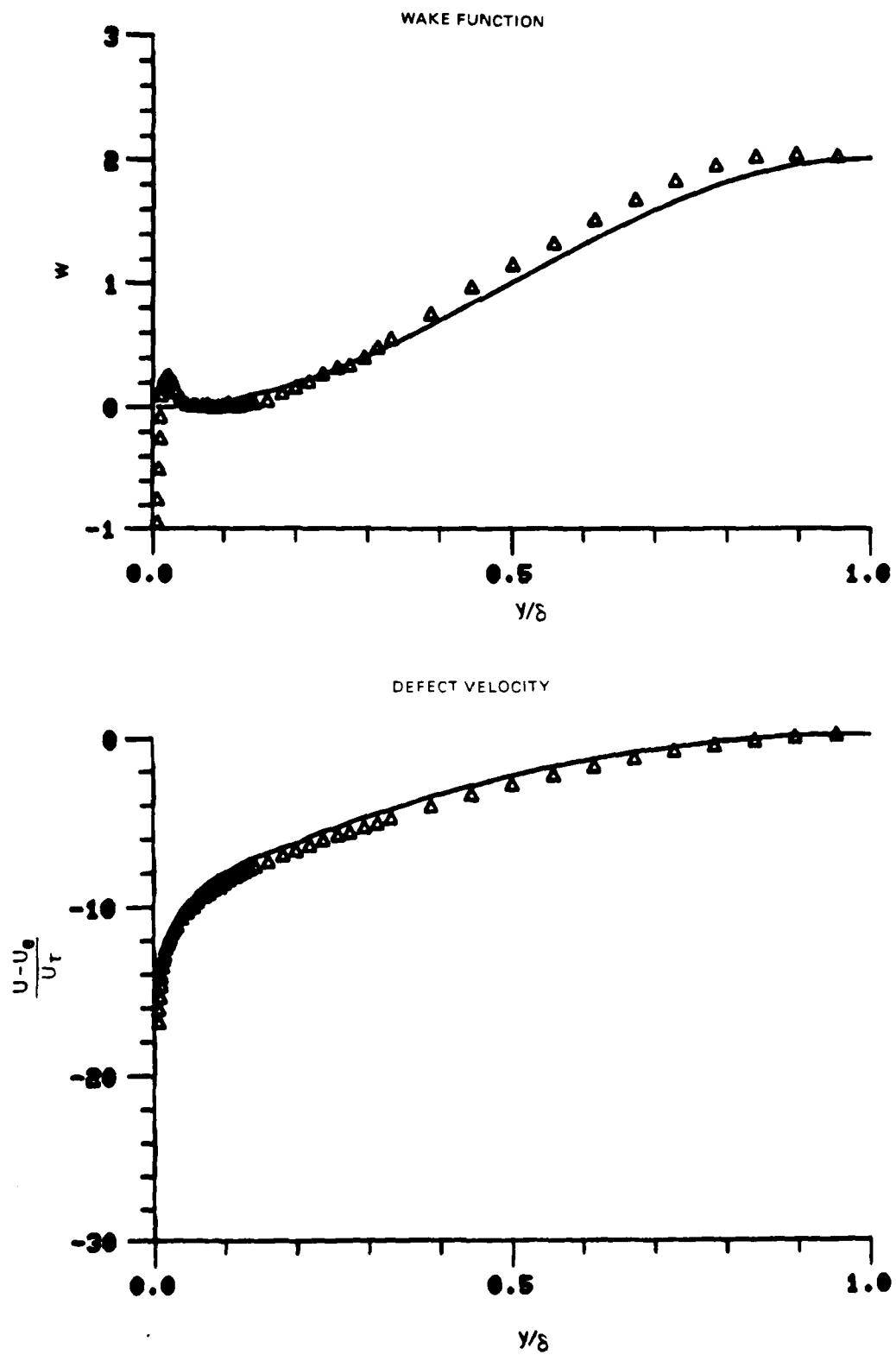


Figure 15. Boundary Layer Velocity Profiles
Run No. 5 Point No. 20

78-12-100-2

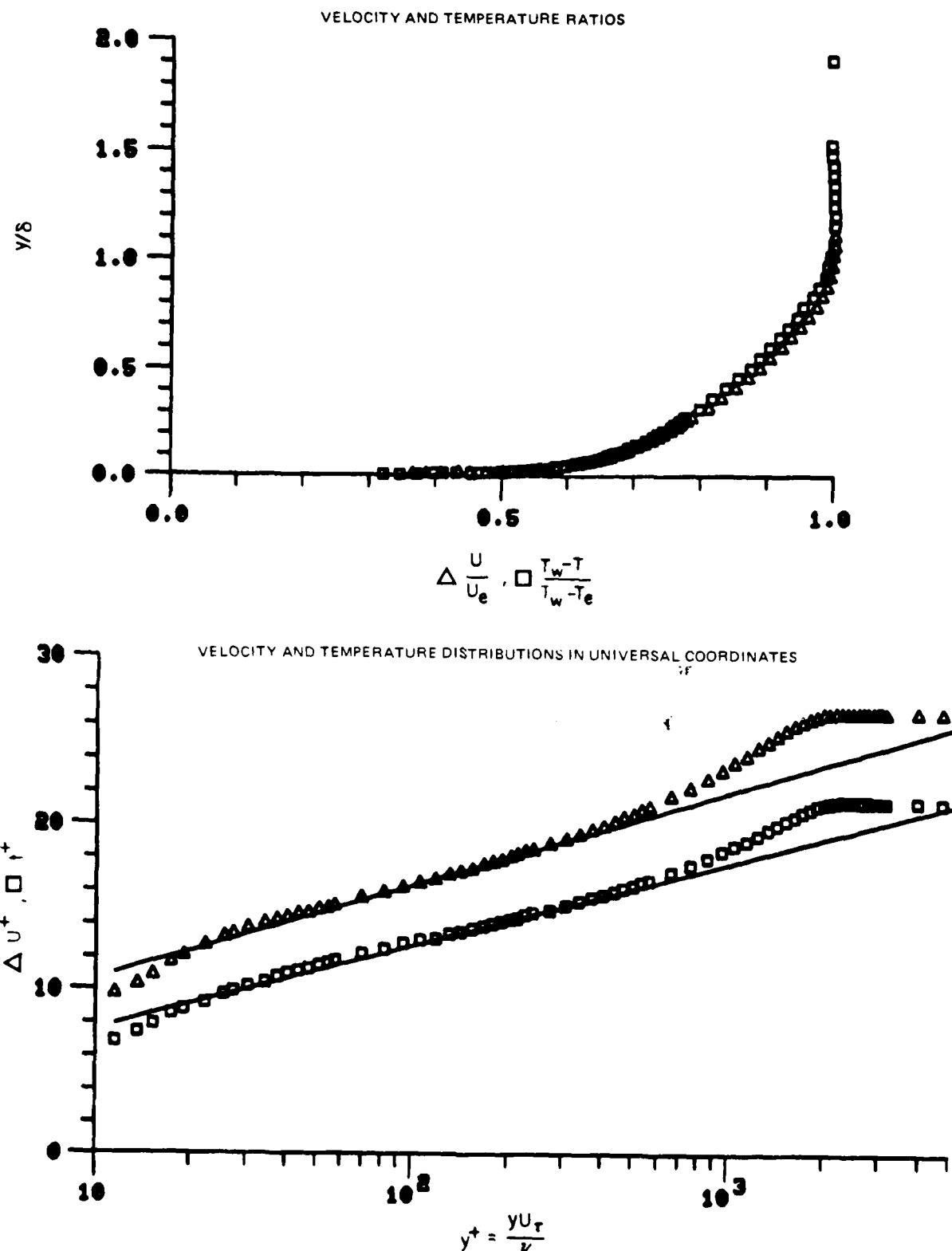


Figure 16. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 21

78-12-100-1

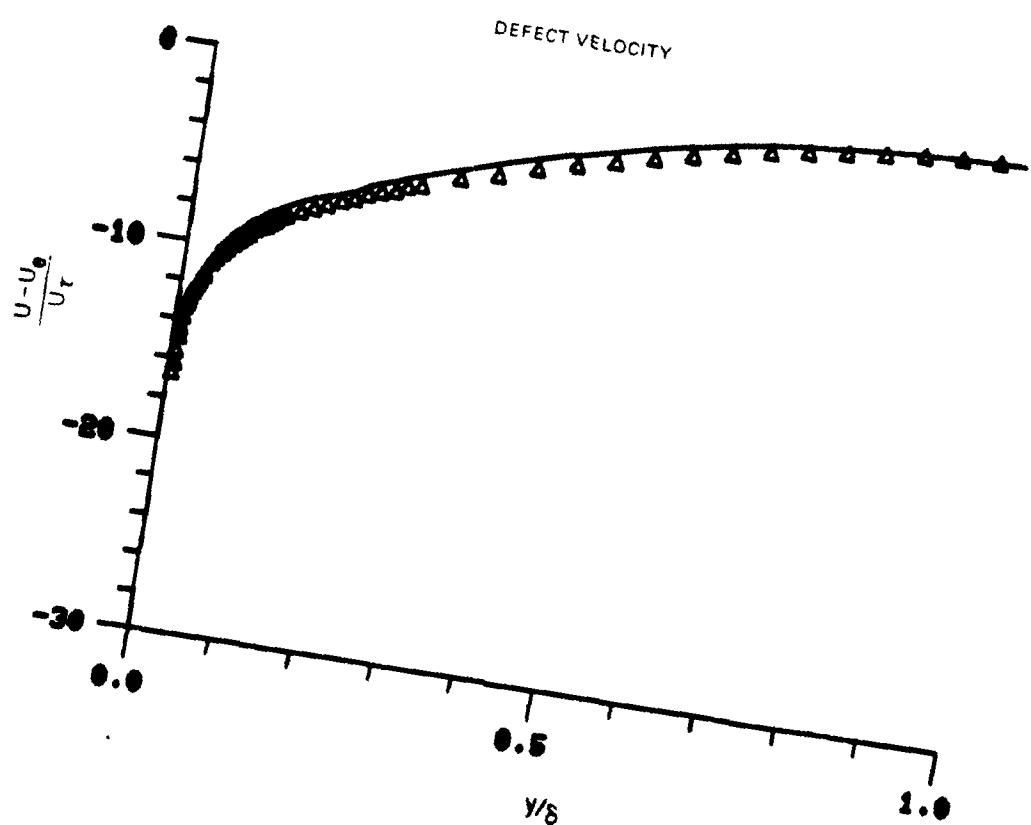
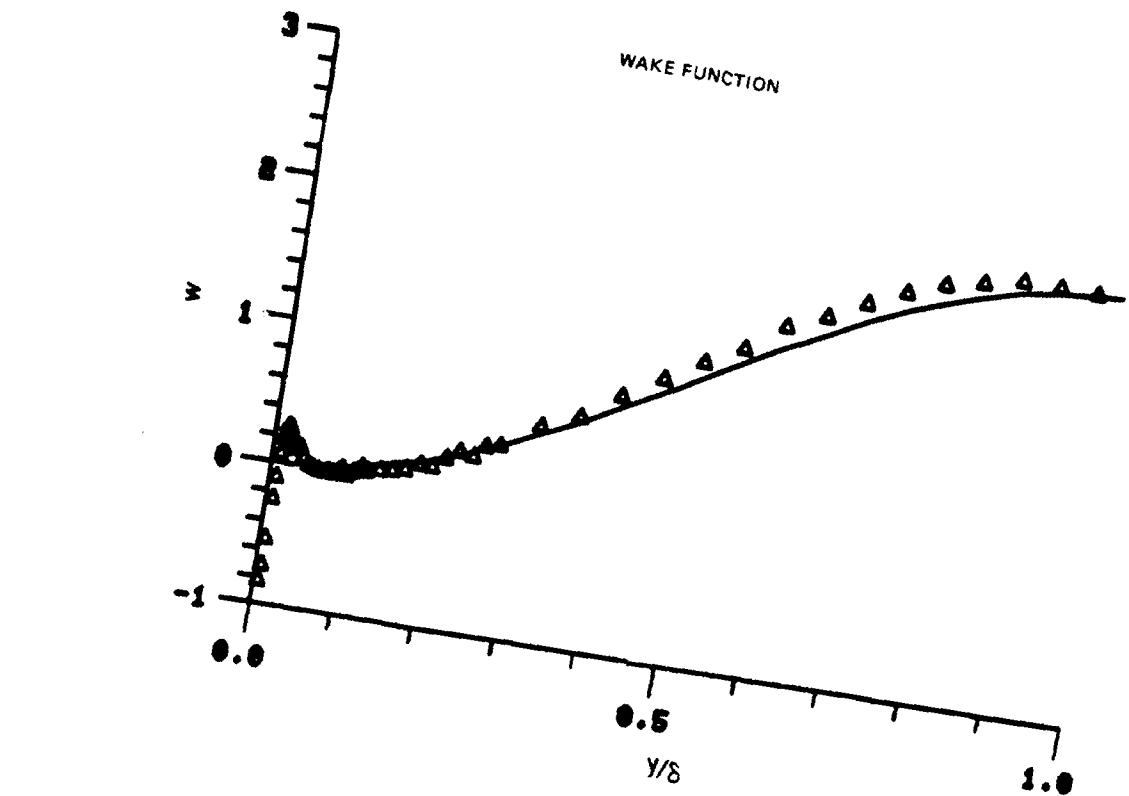


Figure 16. Boundary Layer Velocity Profiles
Run No. 5 Point No. 21

7B-12-100-2

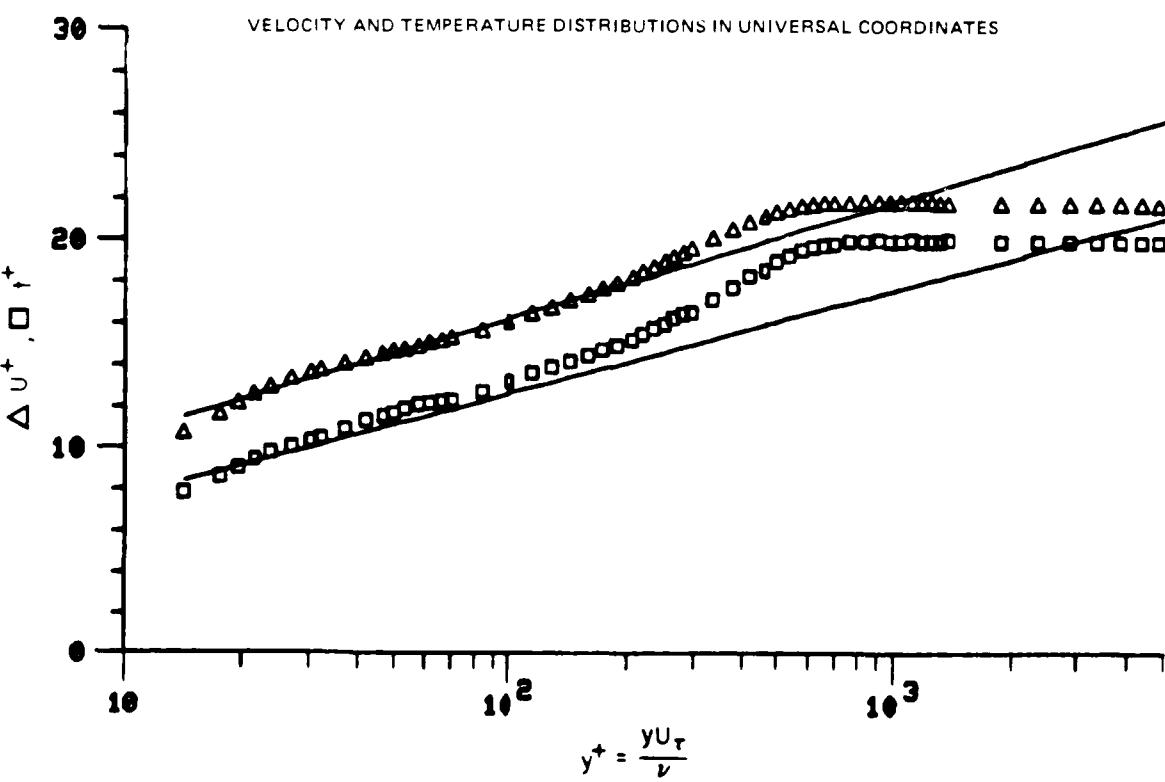
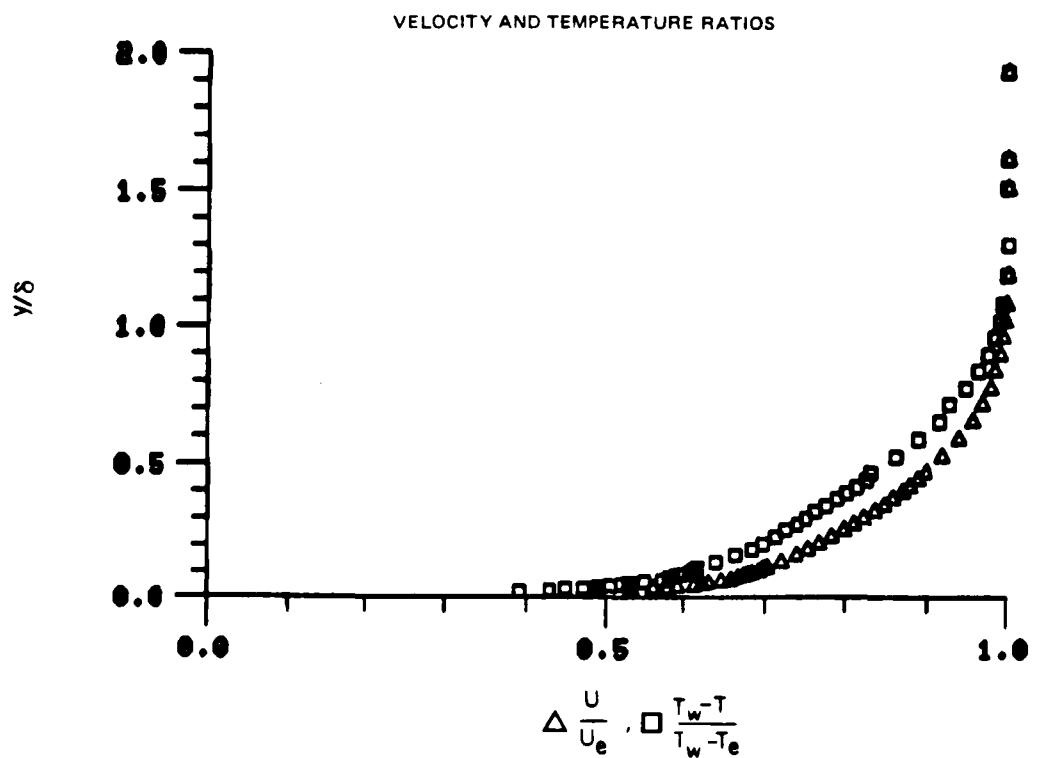


Figure 17. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 3

78-12-100-1

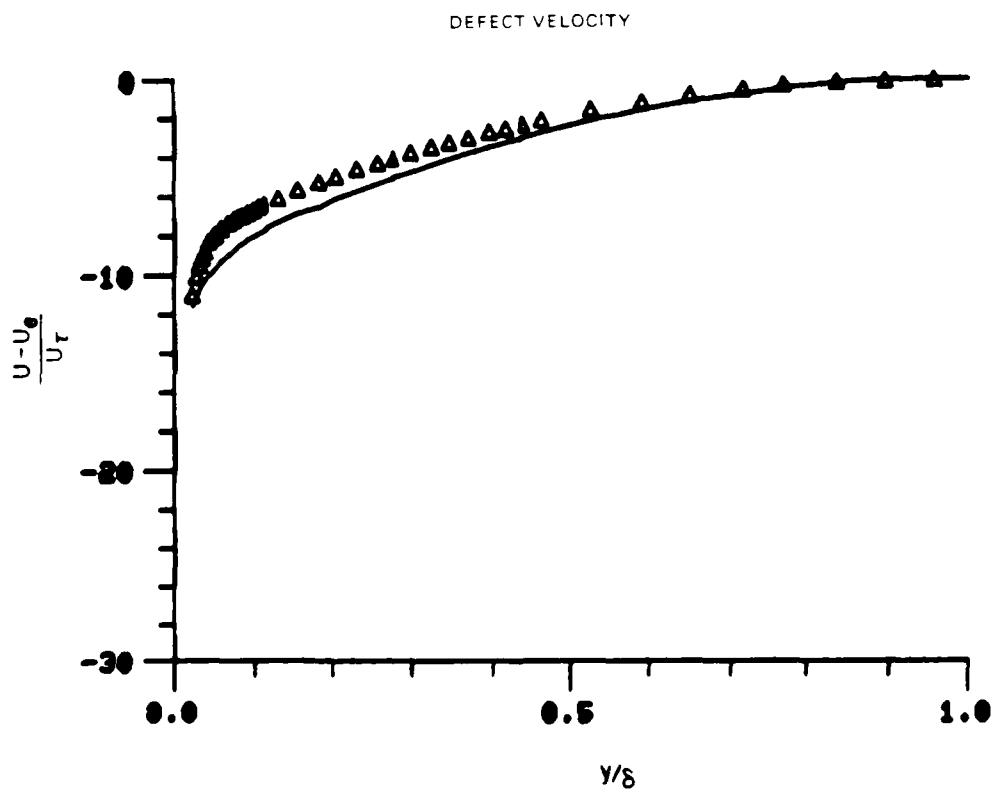
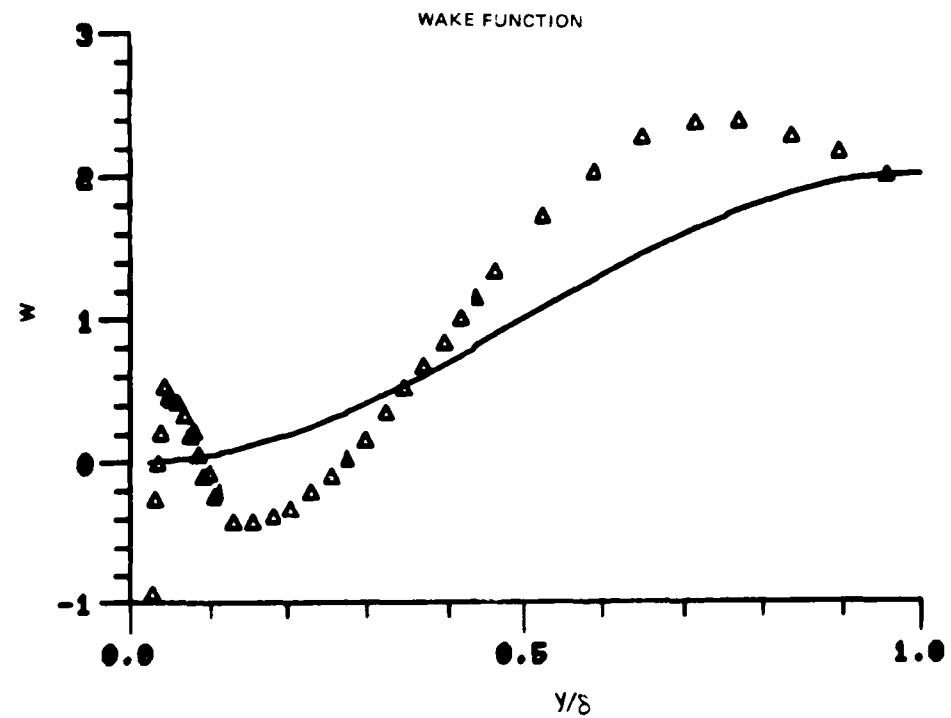


Figure 17. Boundary Layer Velocity Profiles
Run No. 8 Point No. 3

78-12-100-2

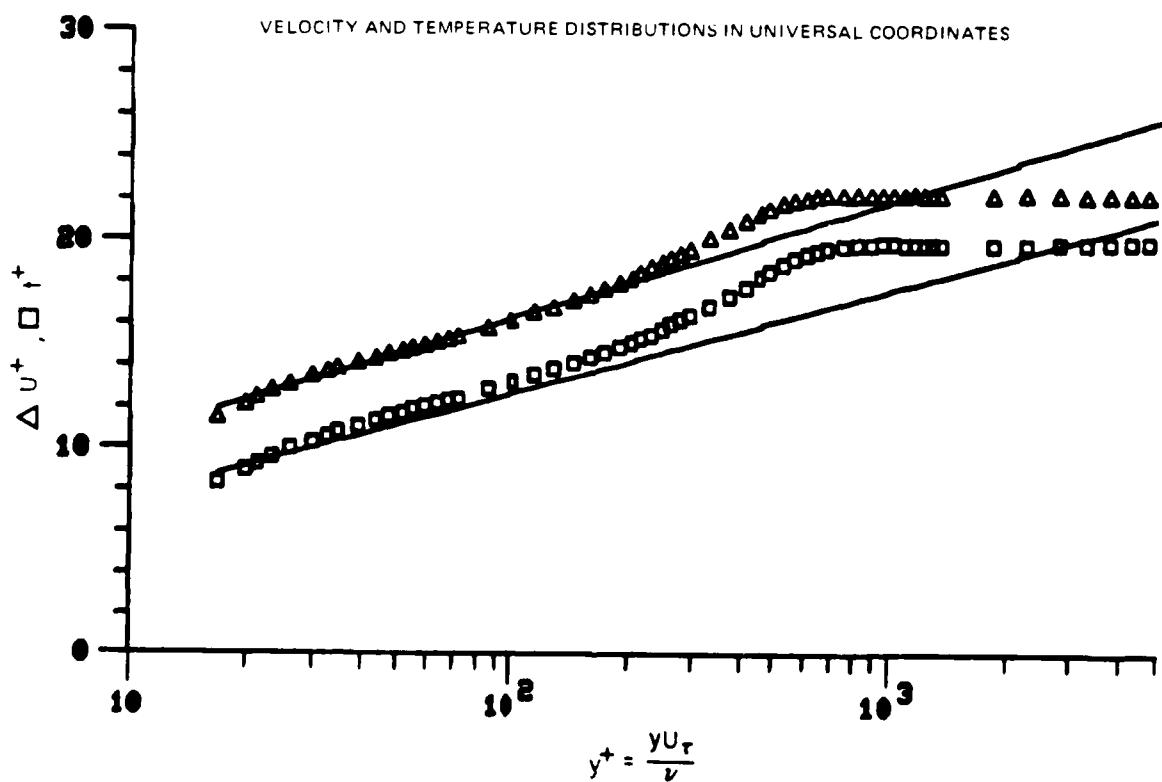
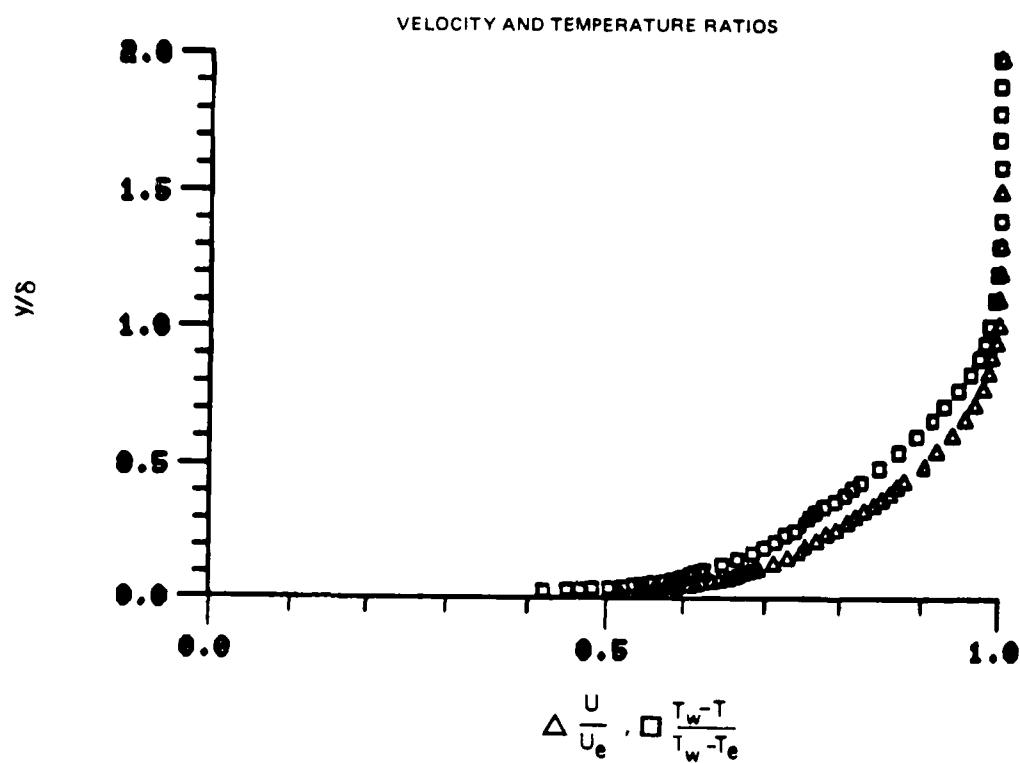


Figure 18. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 4

78-12-100-1

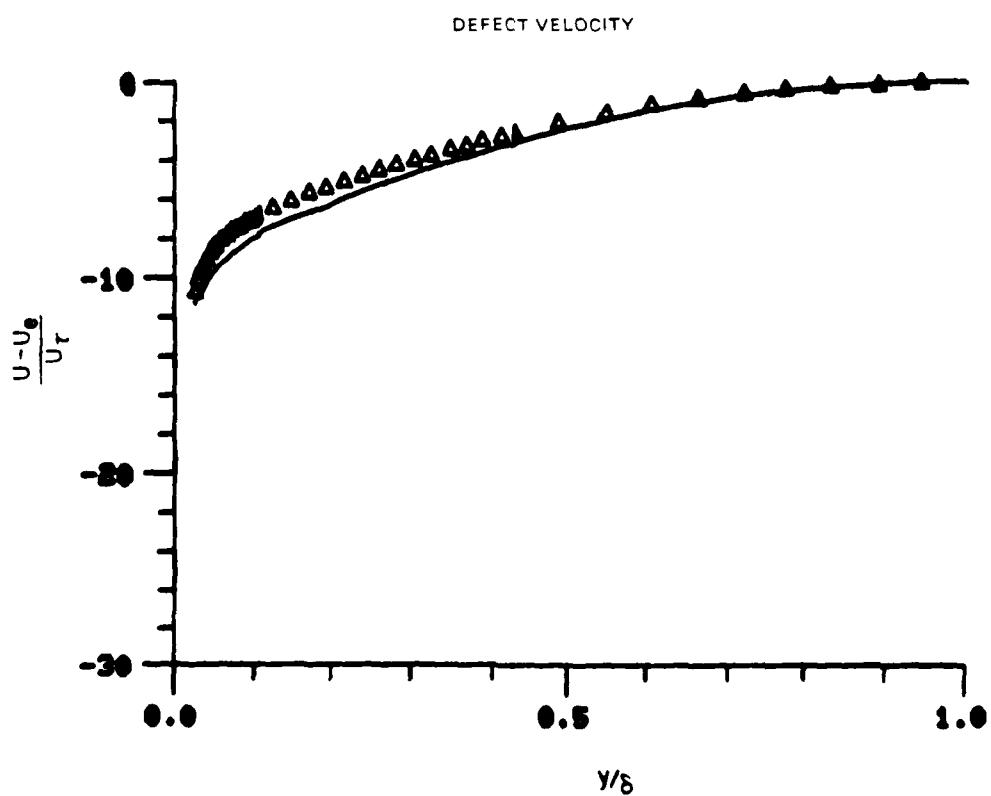
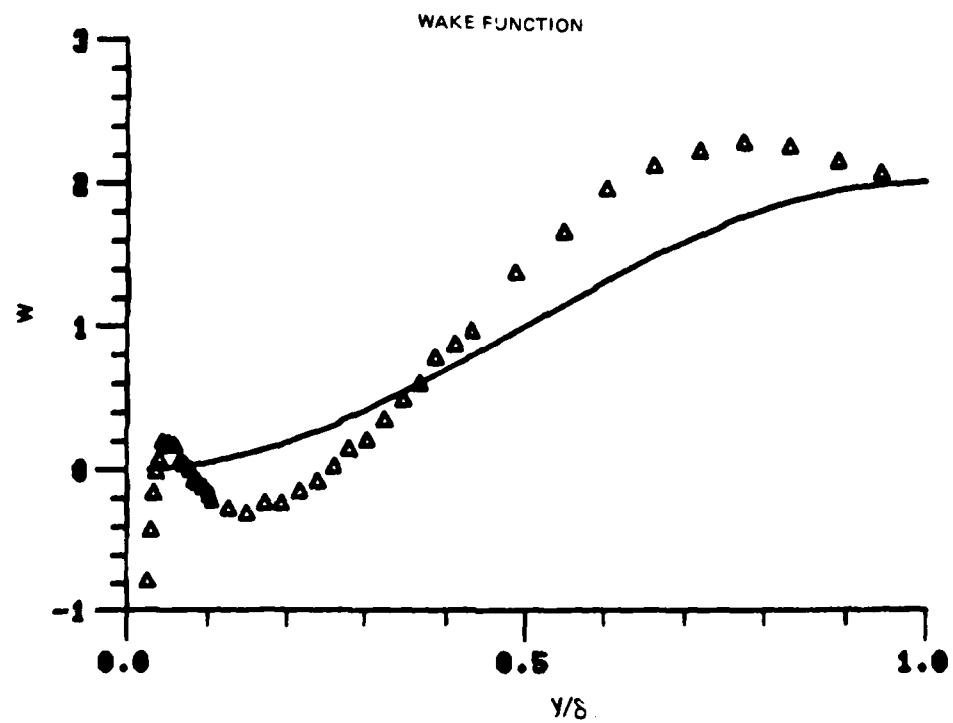


Figure 18. Boundary Layer Velocity Profiles
Run No. 8 Point No. 4

78-12-100-2

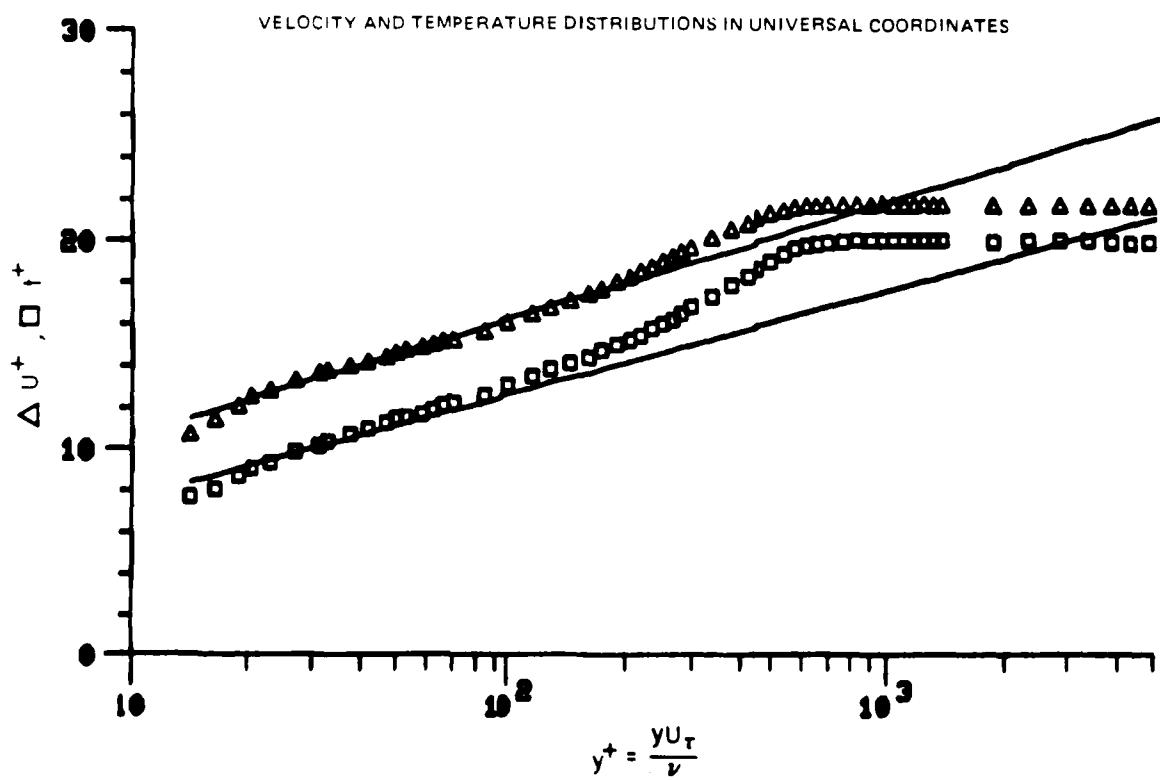
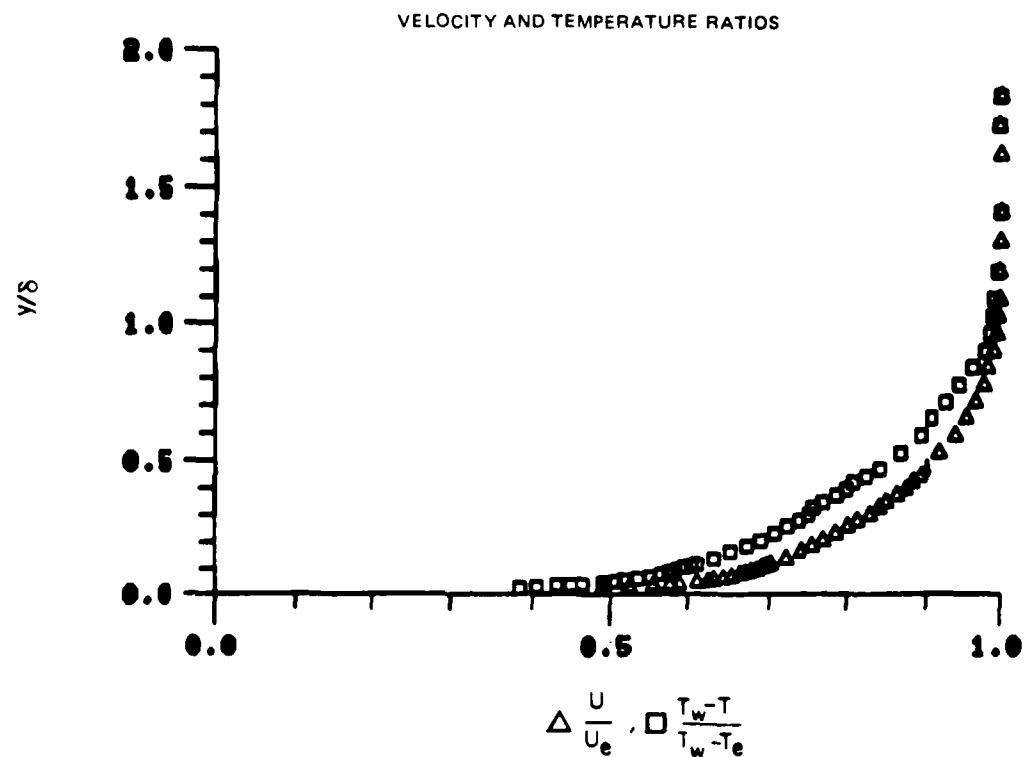


Figure 19. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 5

78-12-100-1

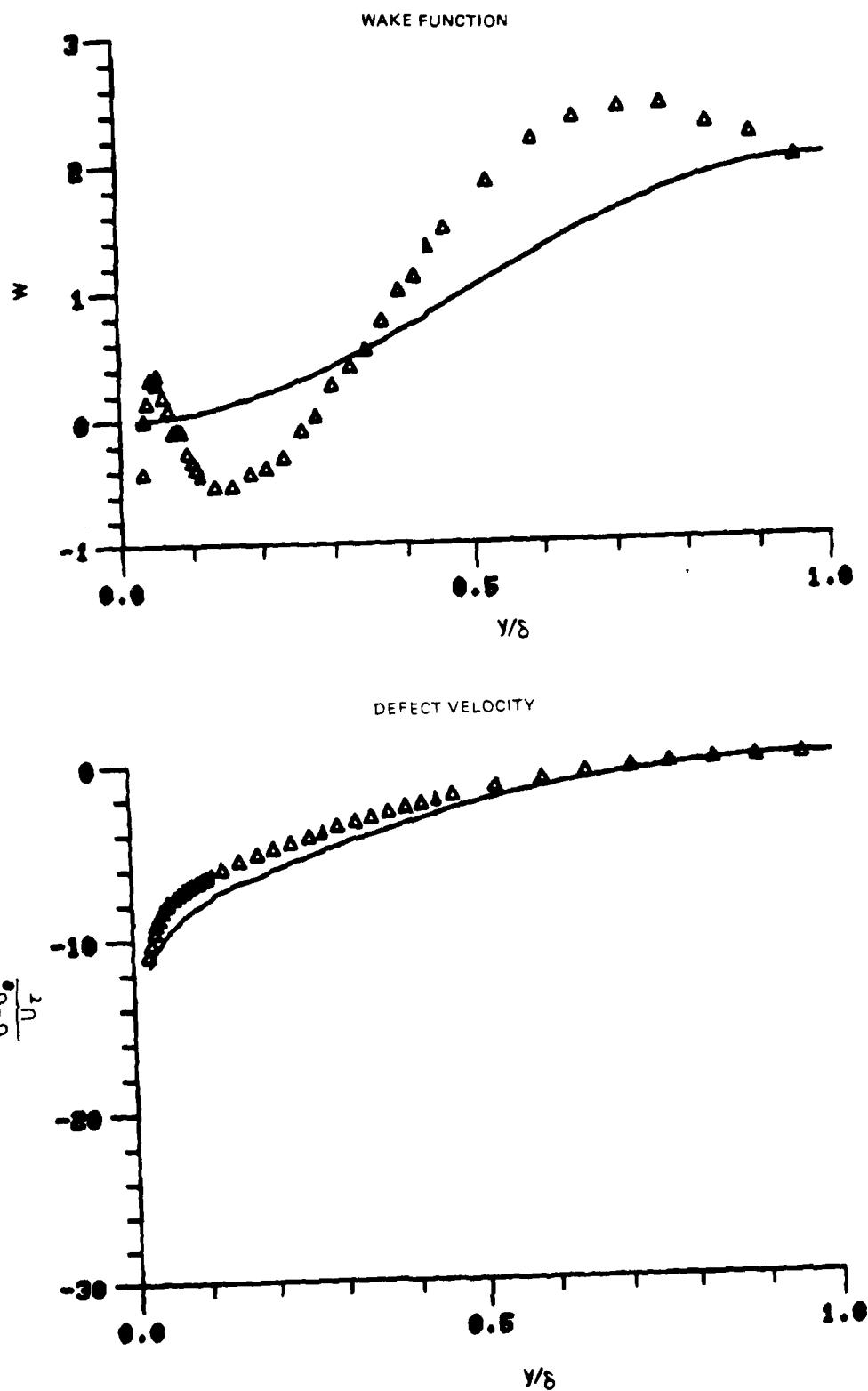


Figure 19. Boundary Layer Velocity Profiles
Run No. 8 Point No. 5

78-12-100-2

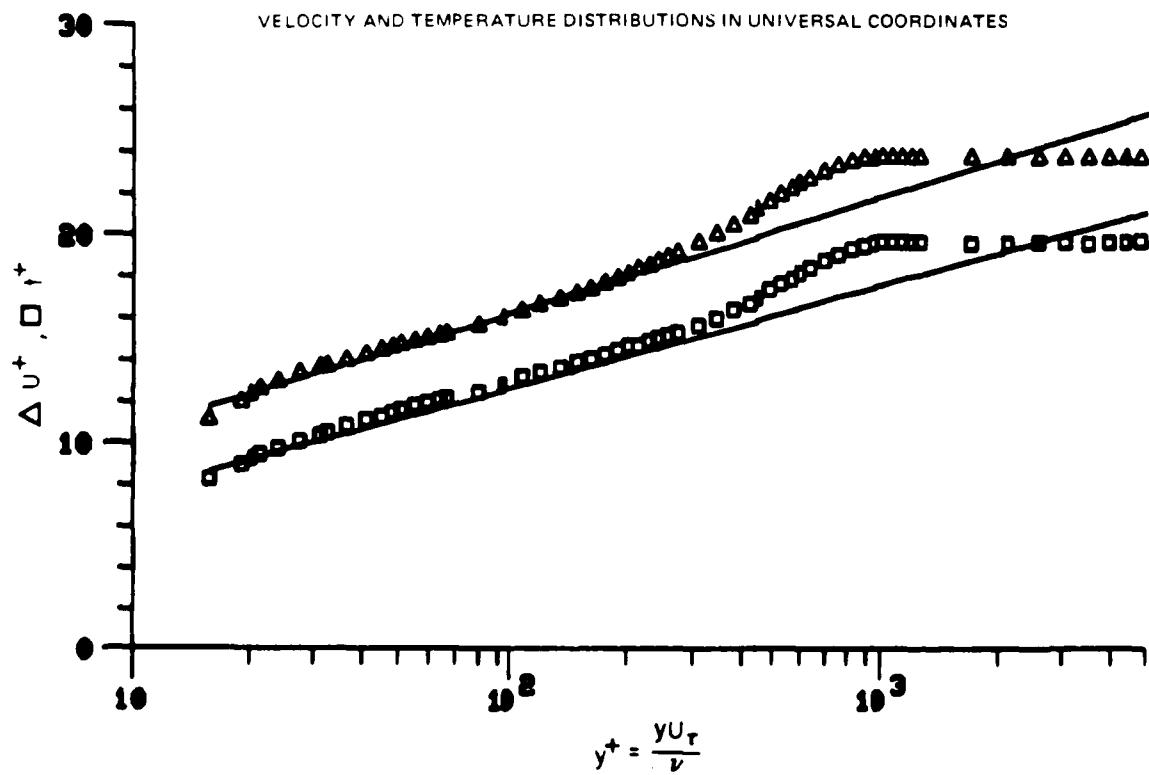
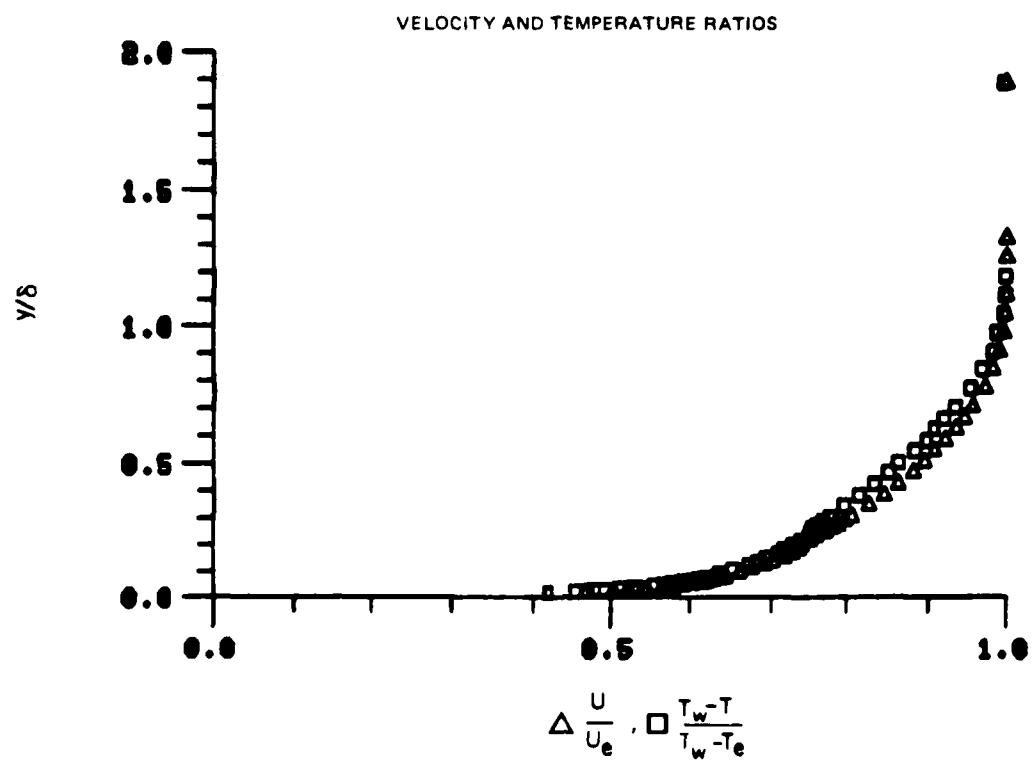


Figure 20. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 7

78-12-100-1

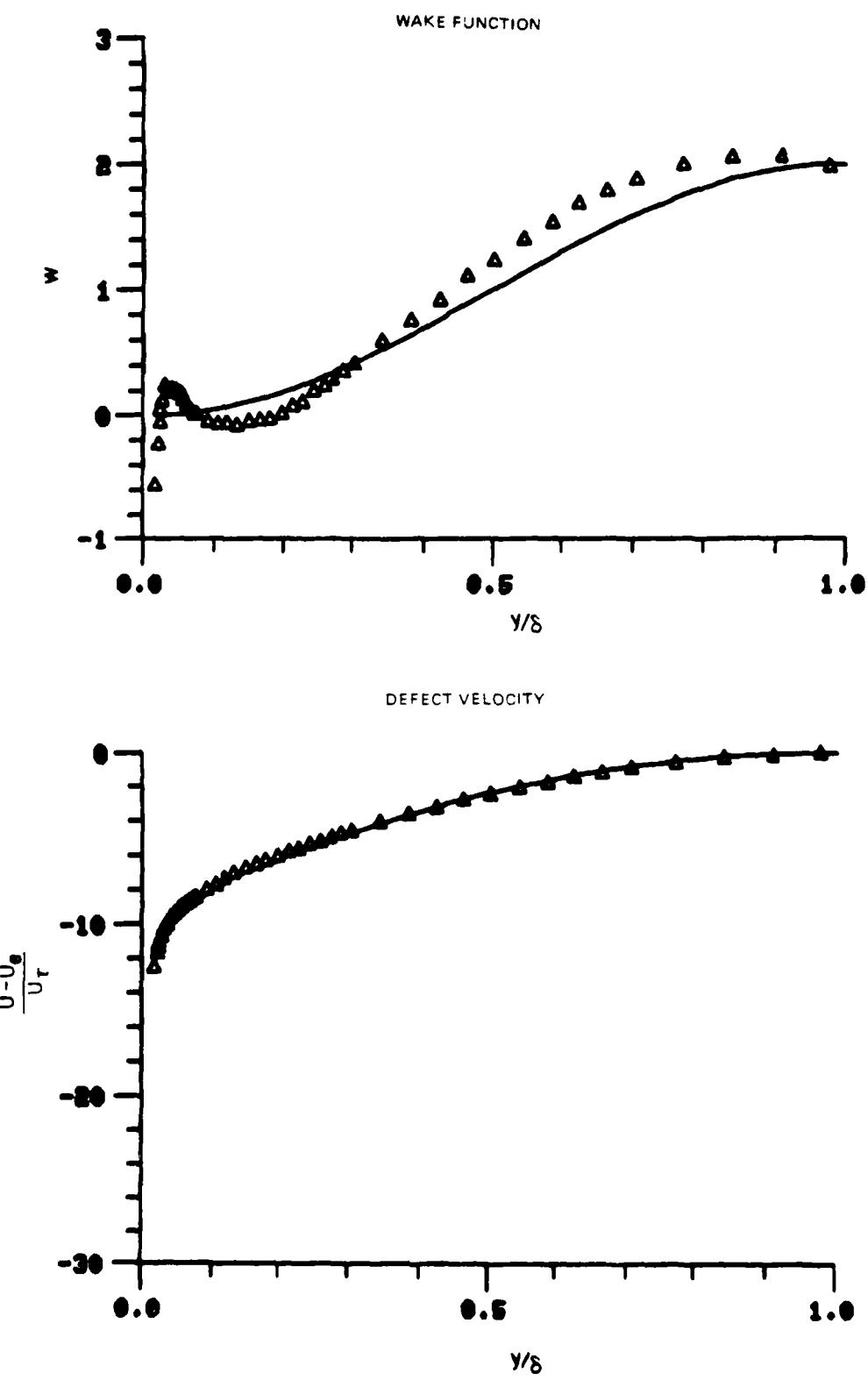
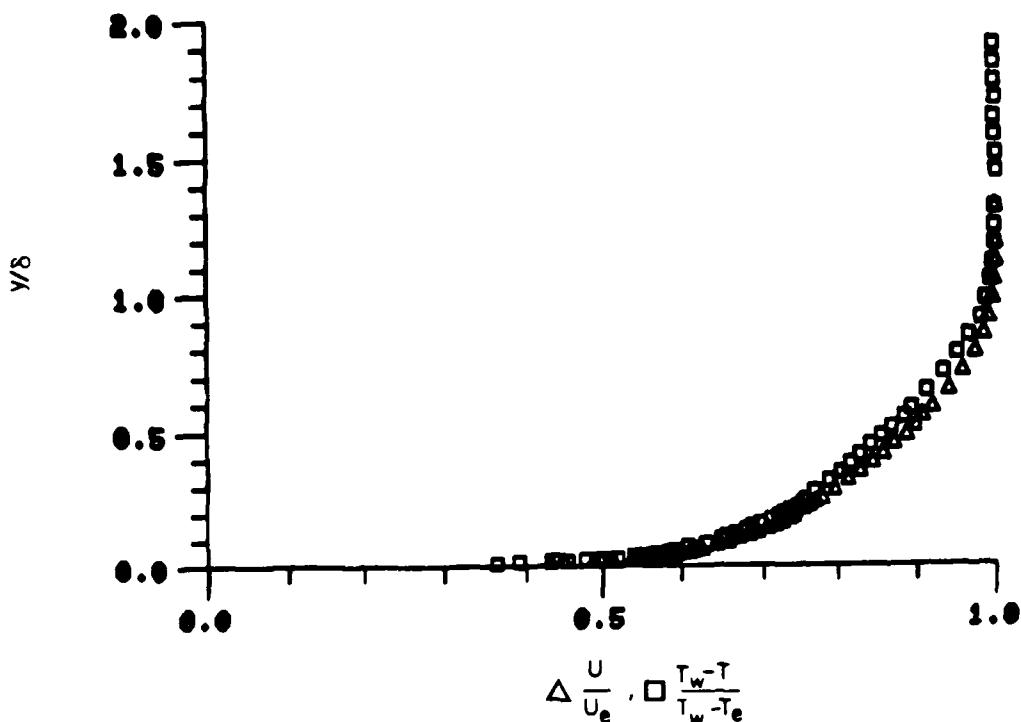


Figure 20. Boundary Layer Velocity Profiles
Run No. 8 Point No. 7

78-12-100-2

VELOCITY AND TEMPERATURE RATIOS



VELOCITY AND TEMPERATURE DISTRIBUTIONS IN UNIVERSAL COORDINATES

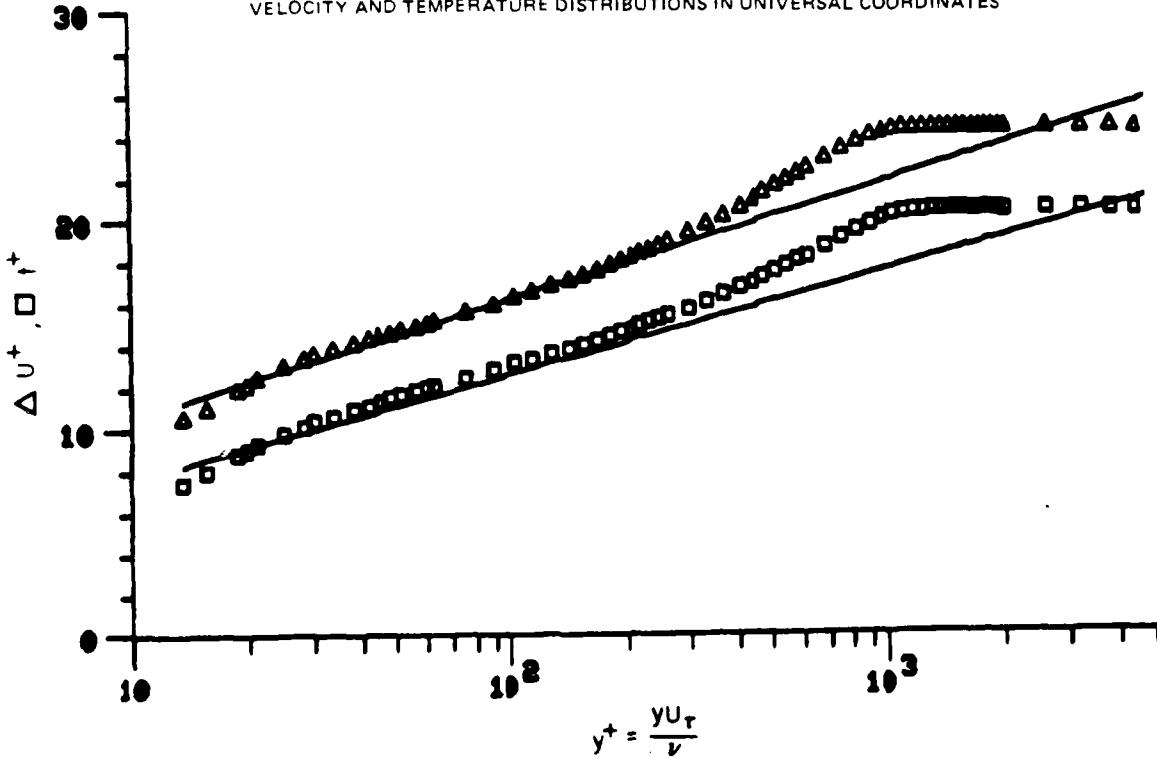


Figure 21. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 9

78-12-100-1

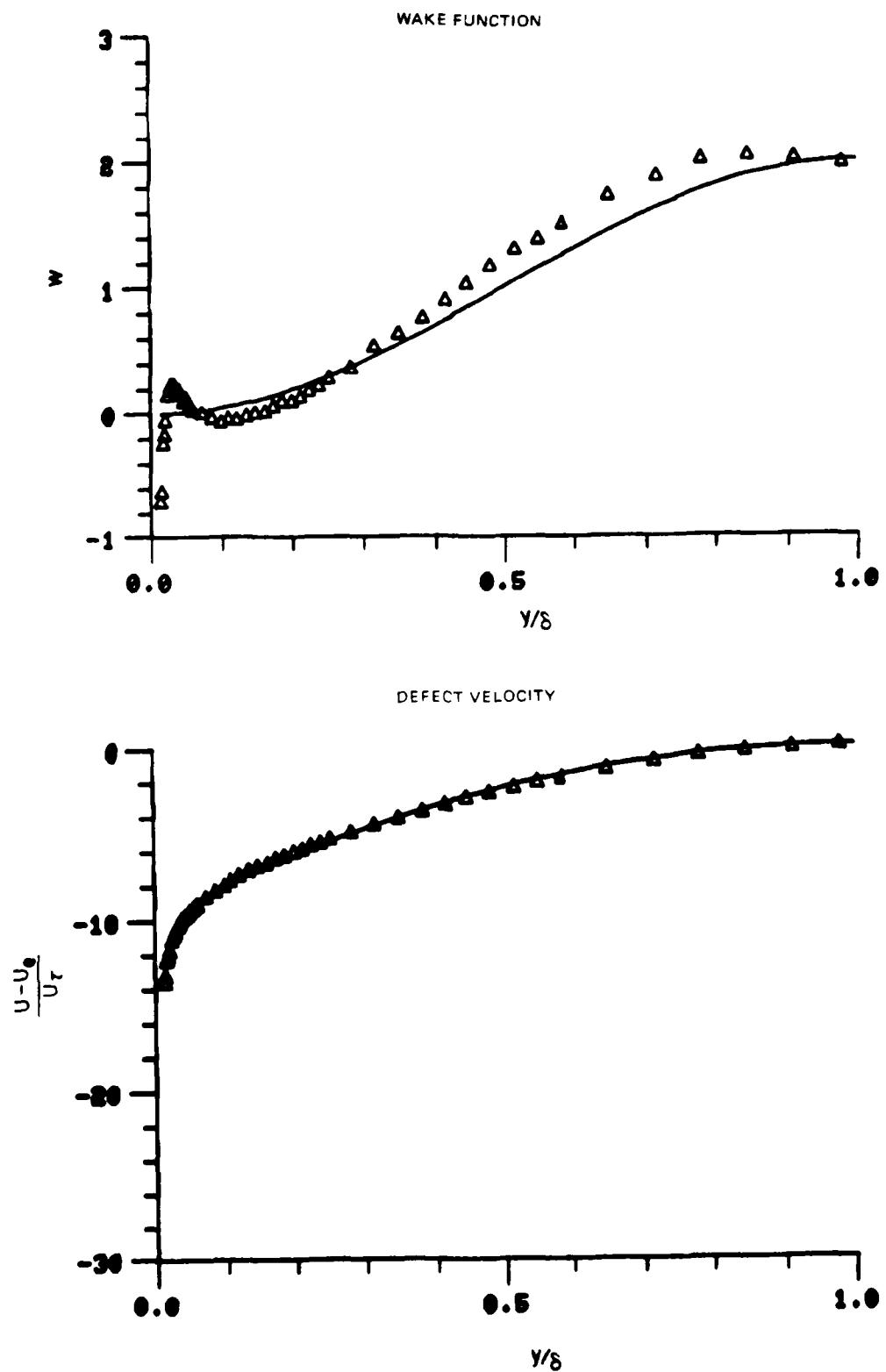


Figure 21. Boundary Layer Velocity Profiles
Run No.8 Point No.9

78-12-100-2

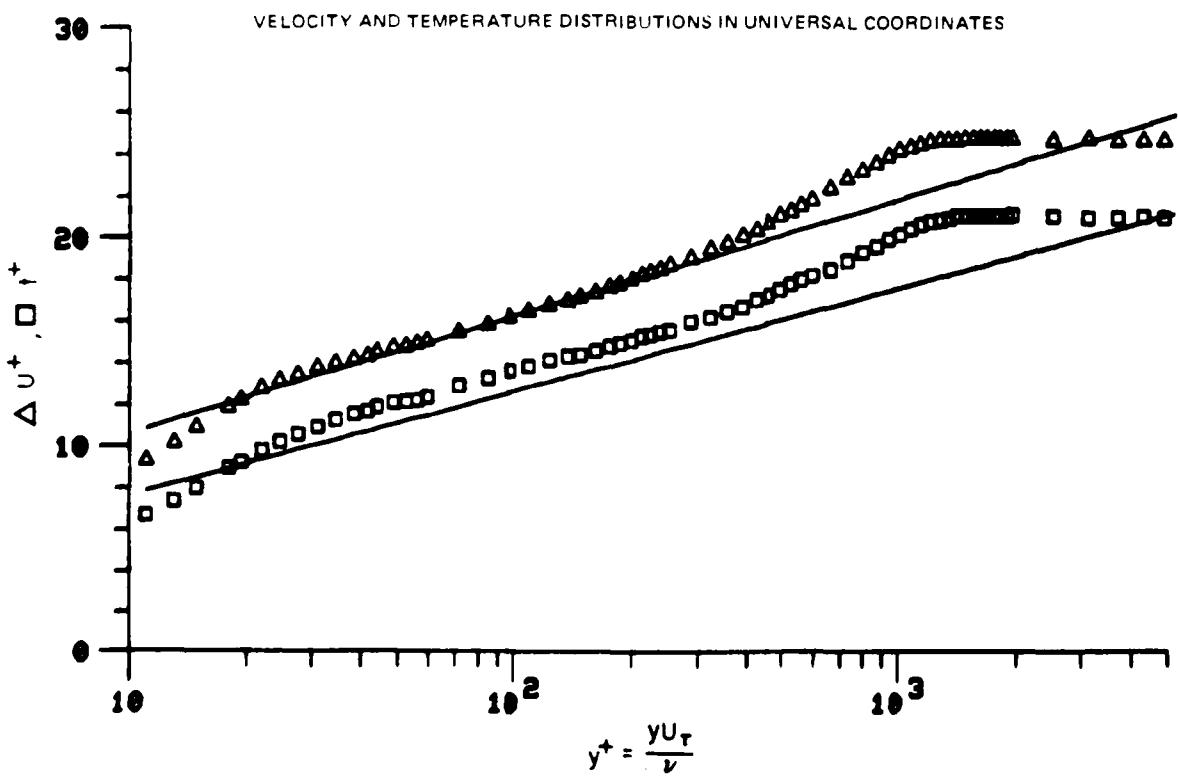
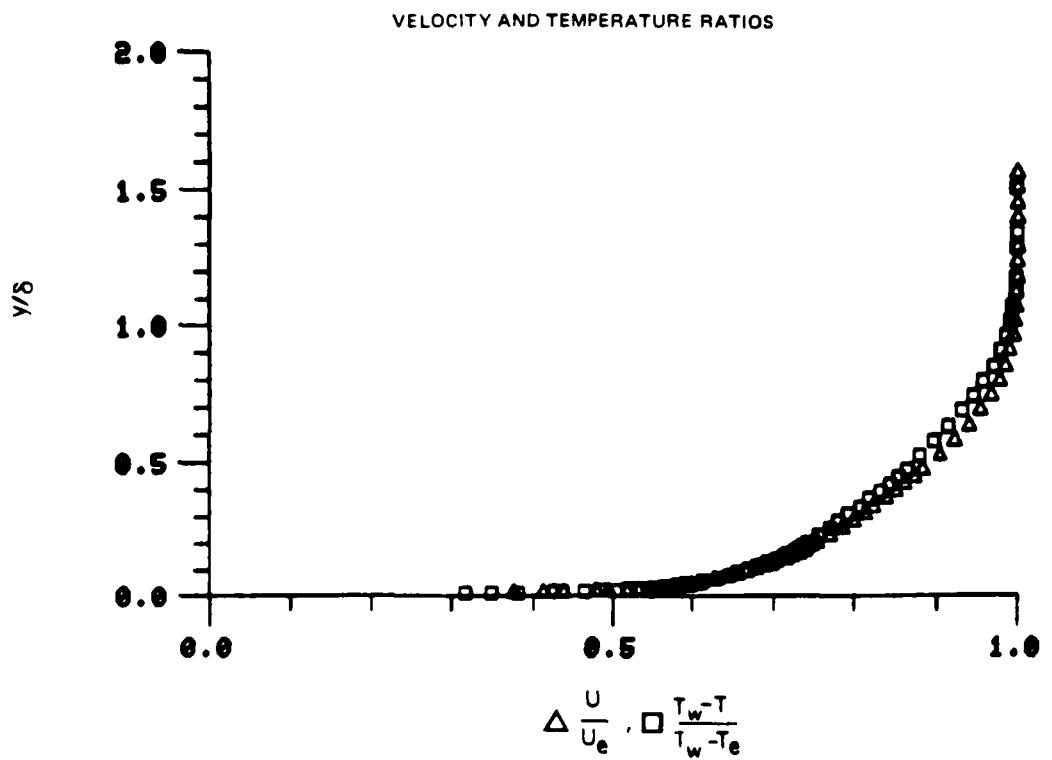


Figure 22. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 10

78-12-100-1

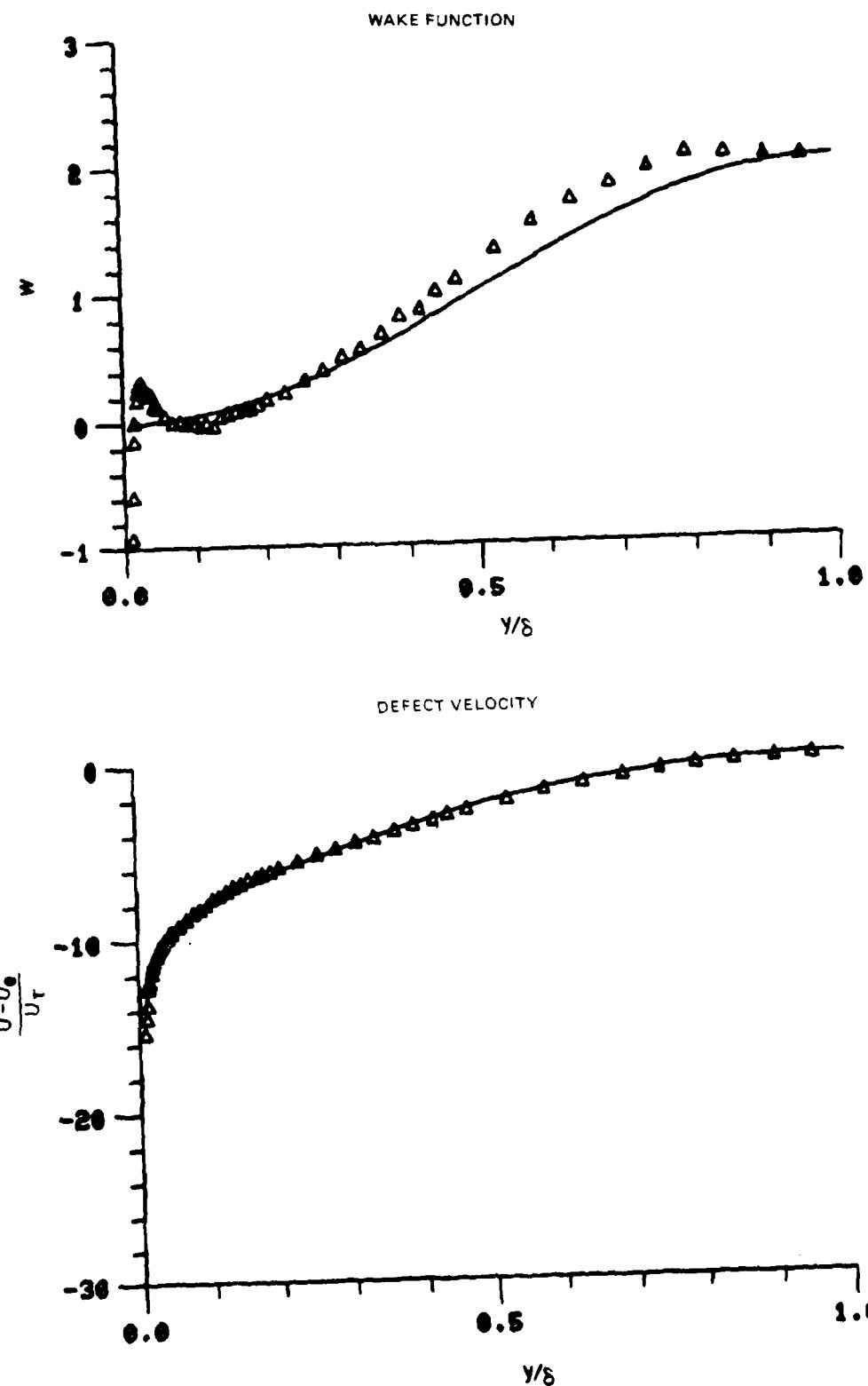


Figure 22. Boundary Layer Velocity Profiles
Run No. 8 Point No. 10

78-12-100-2

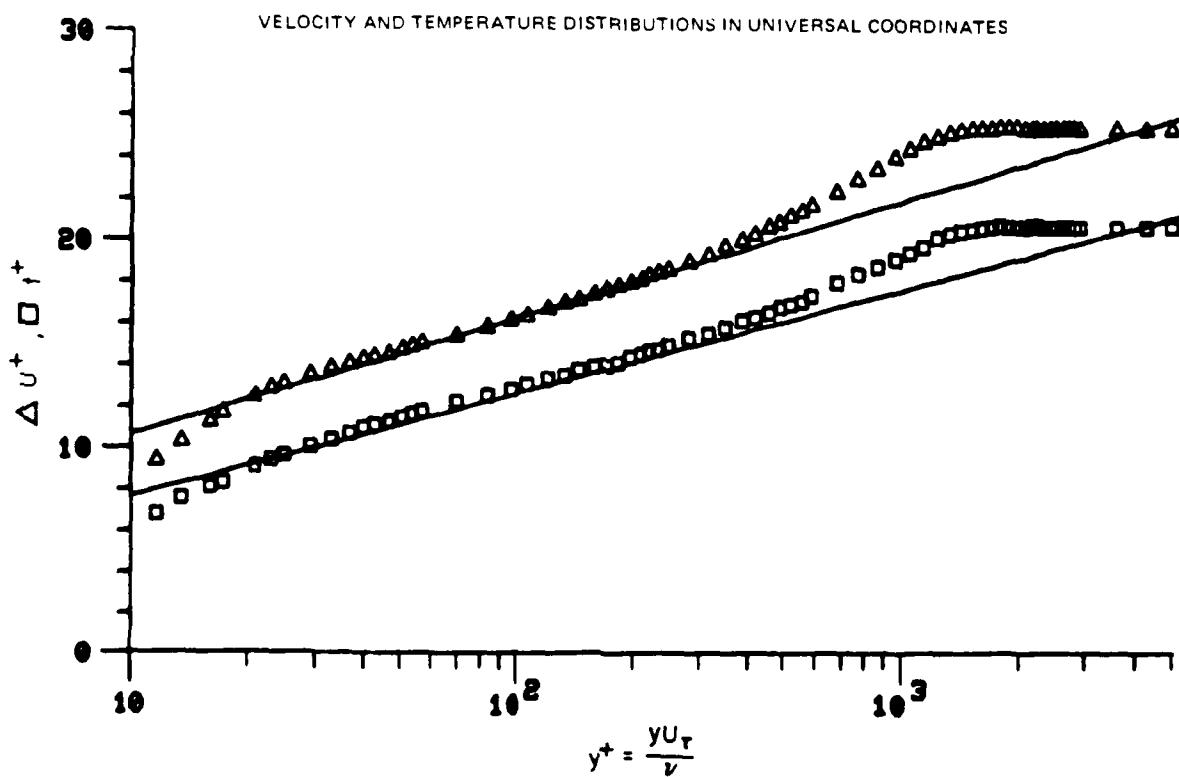
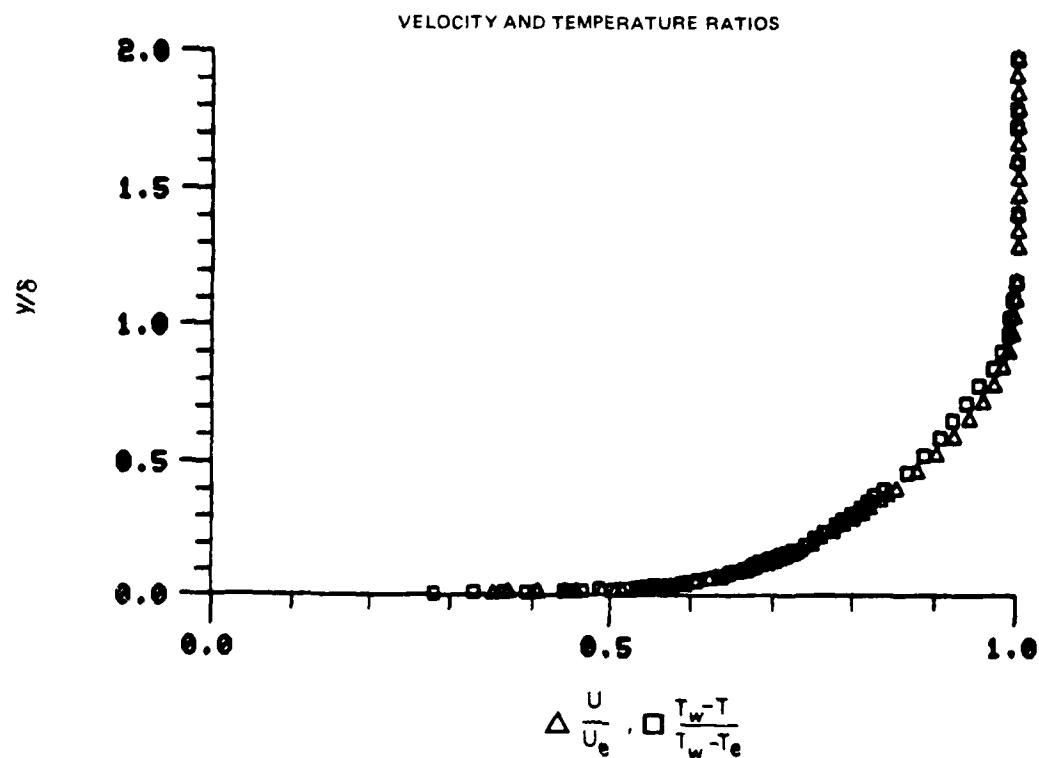


Figure 23. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 13

78-12-100-1

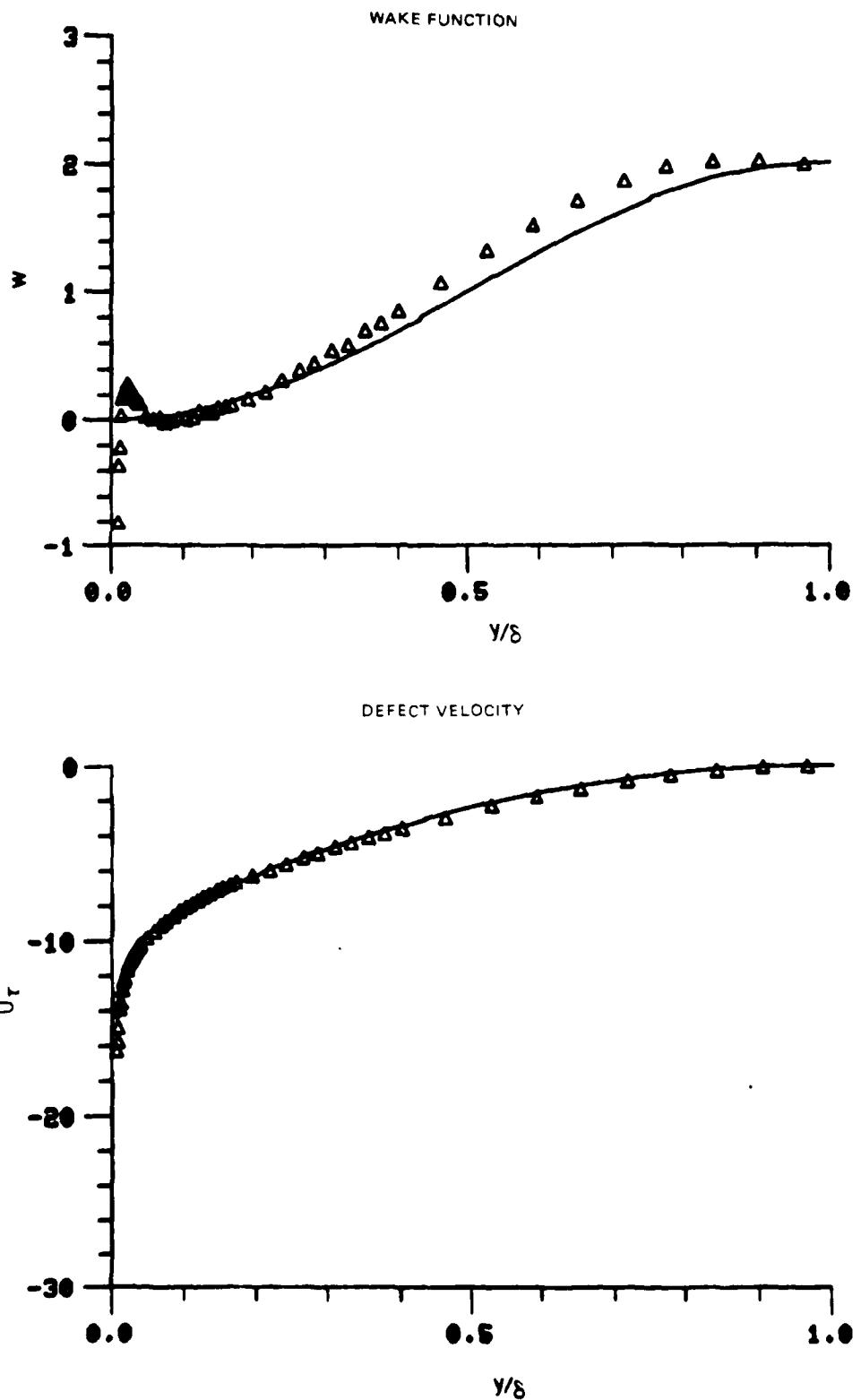


Figure 23. Boundary Layer Velocity Profiles
Run No. 8 Point No. 13

78-12-100-2

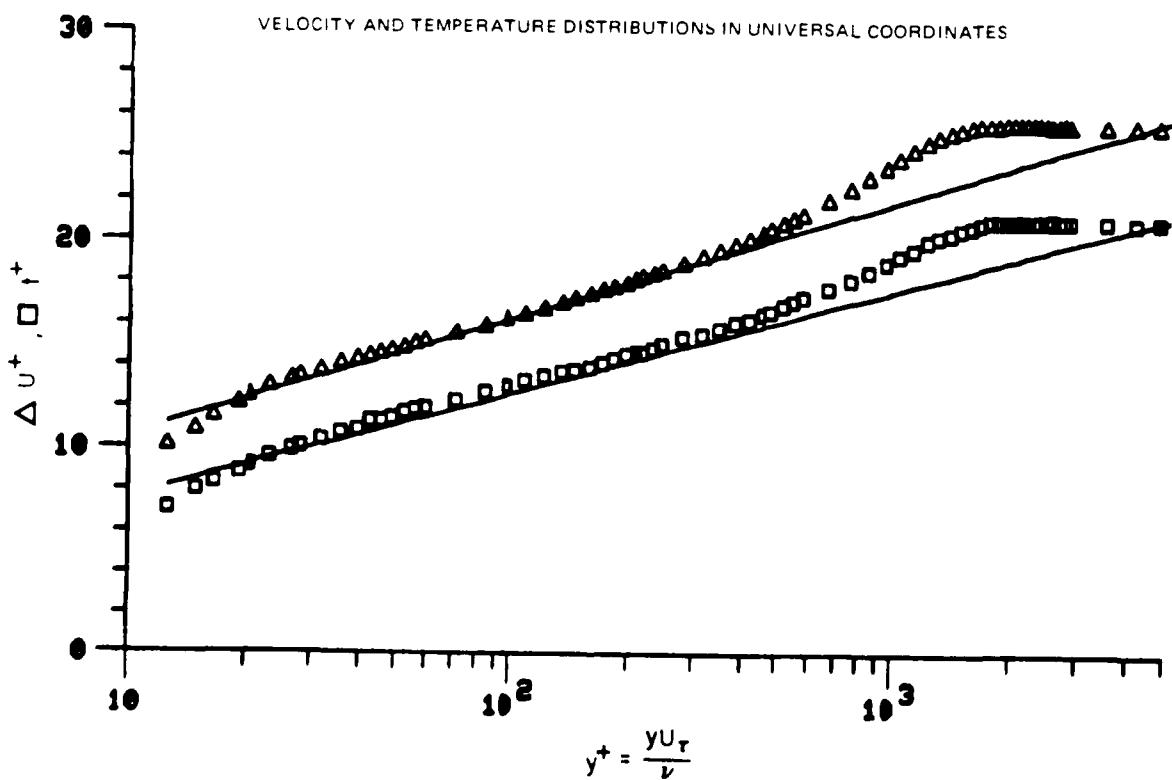
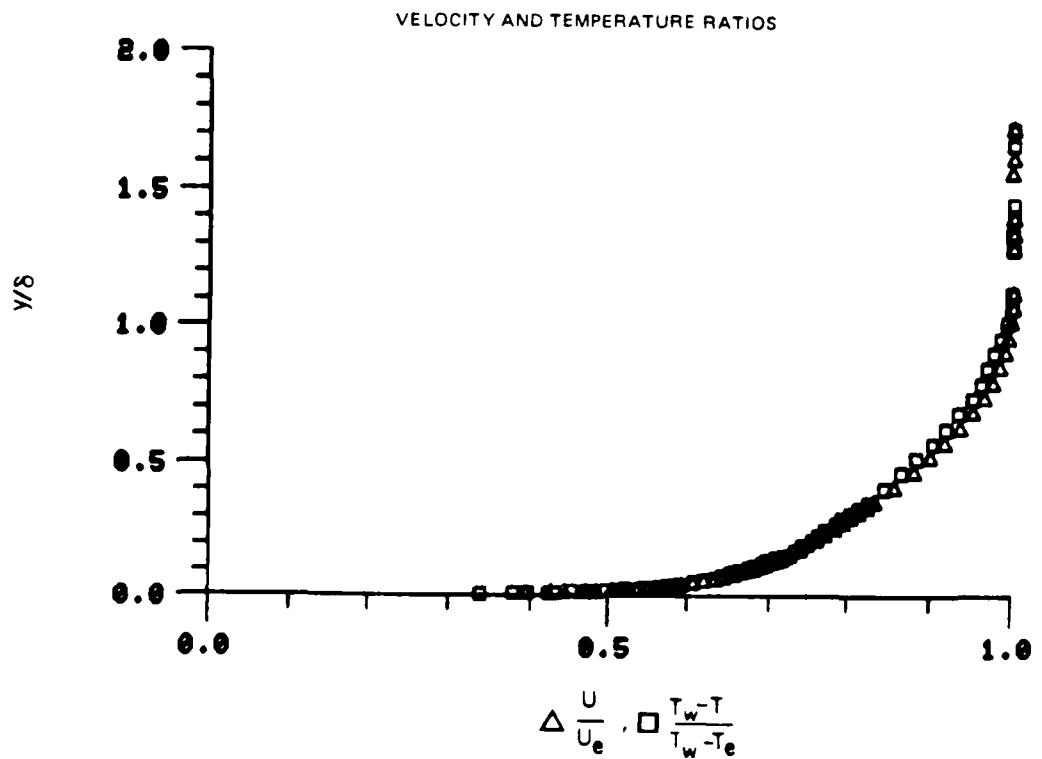


Figure 24. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 14

78-12-100-1

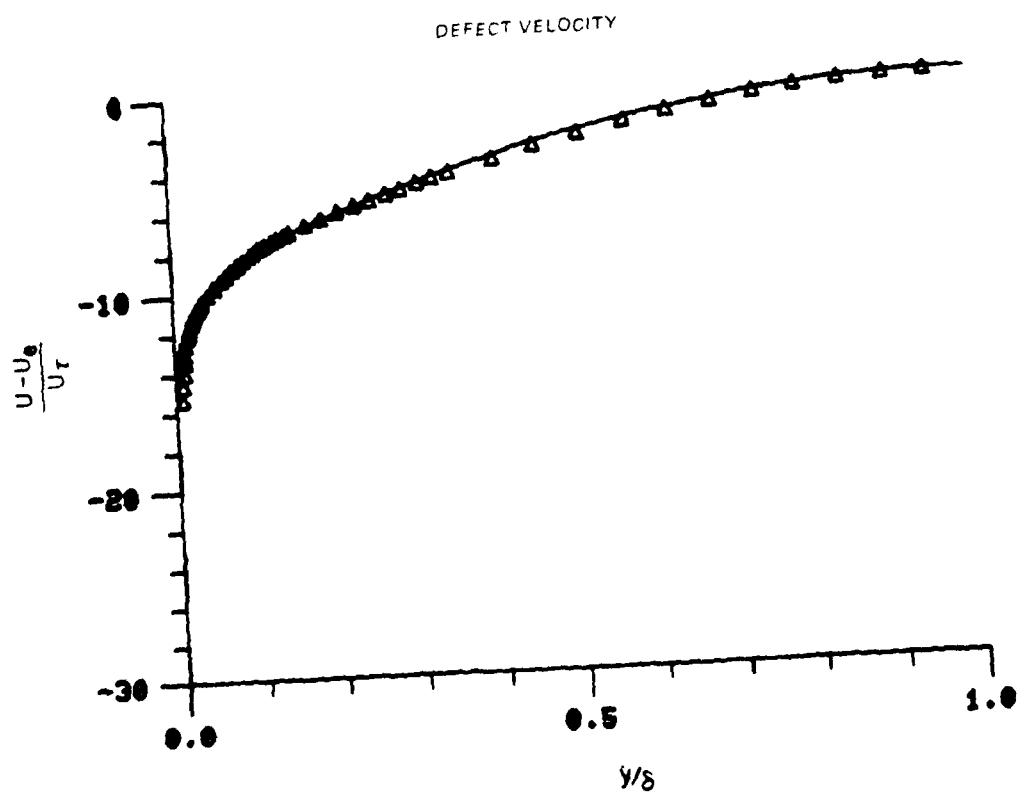
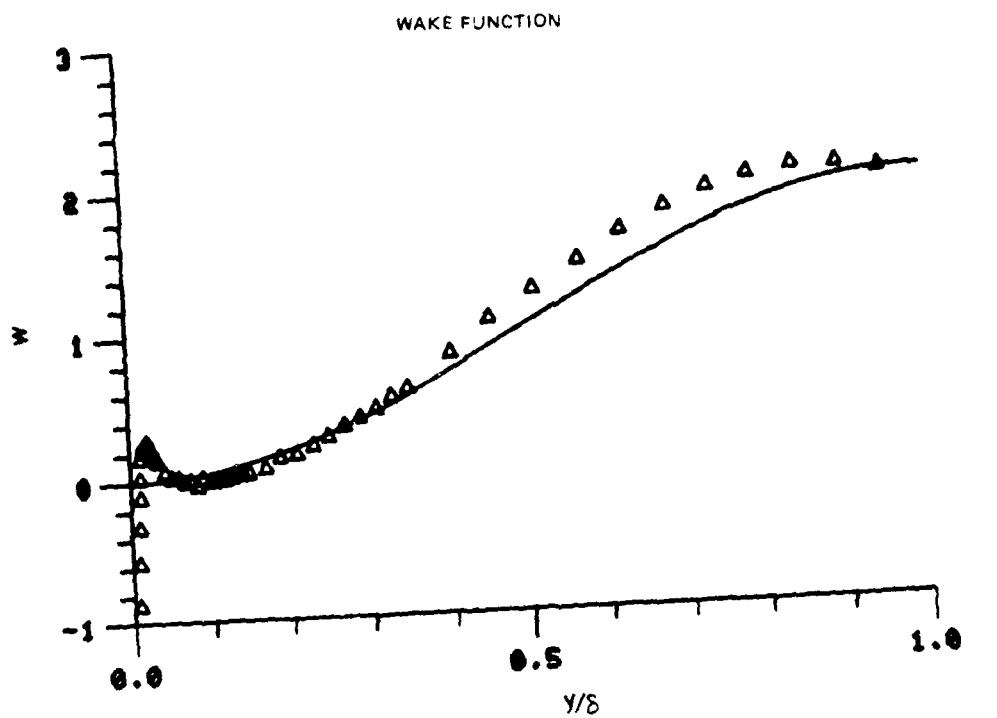


Figure 24. Boundary Layer Velocity Profiles
Run No. 8 Point No. 14

78-12-100-2

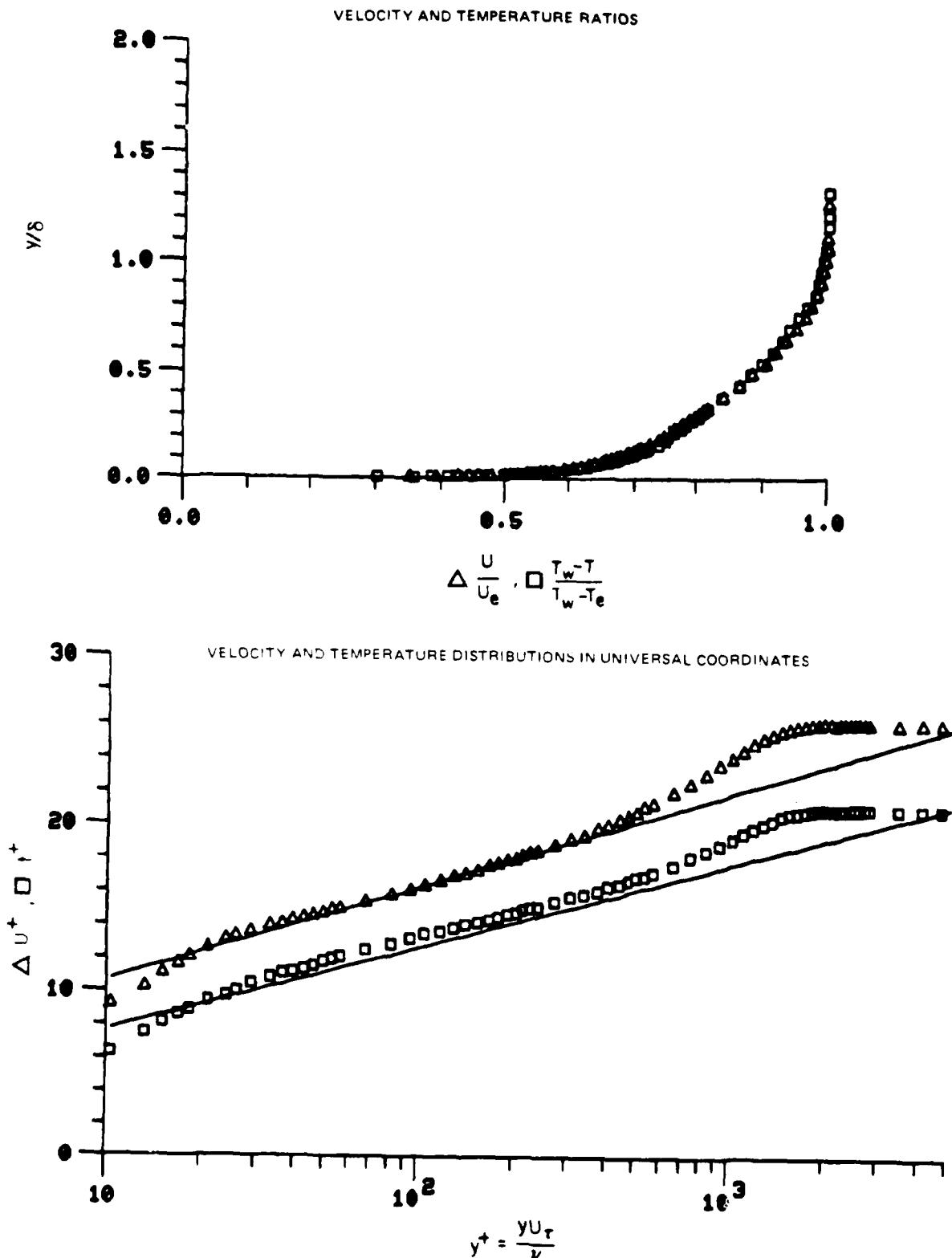


Figure 25. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 15

78-12-100-1

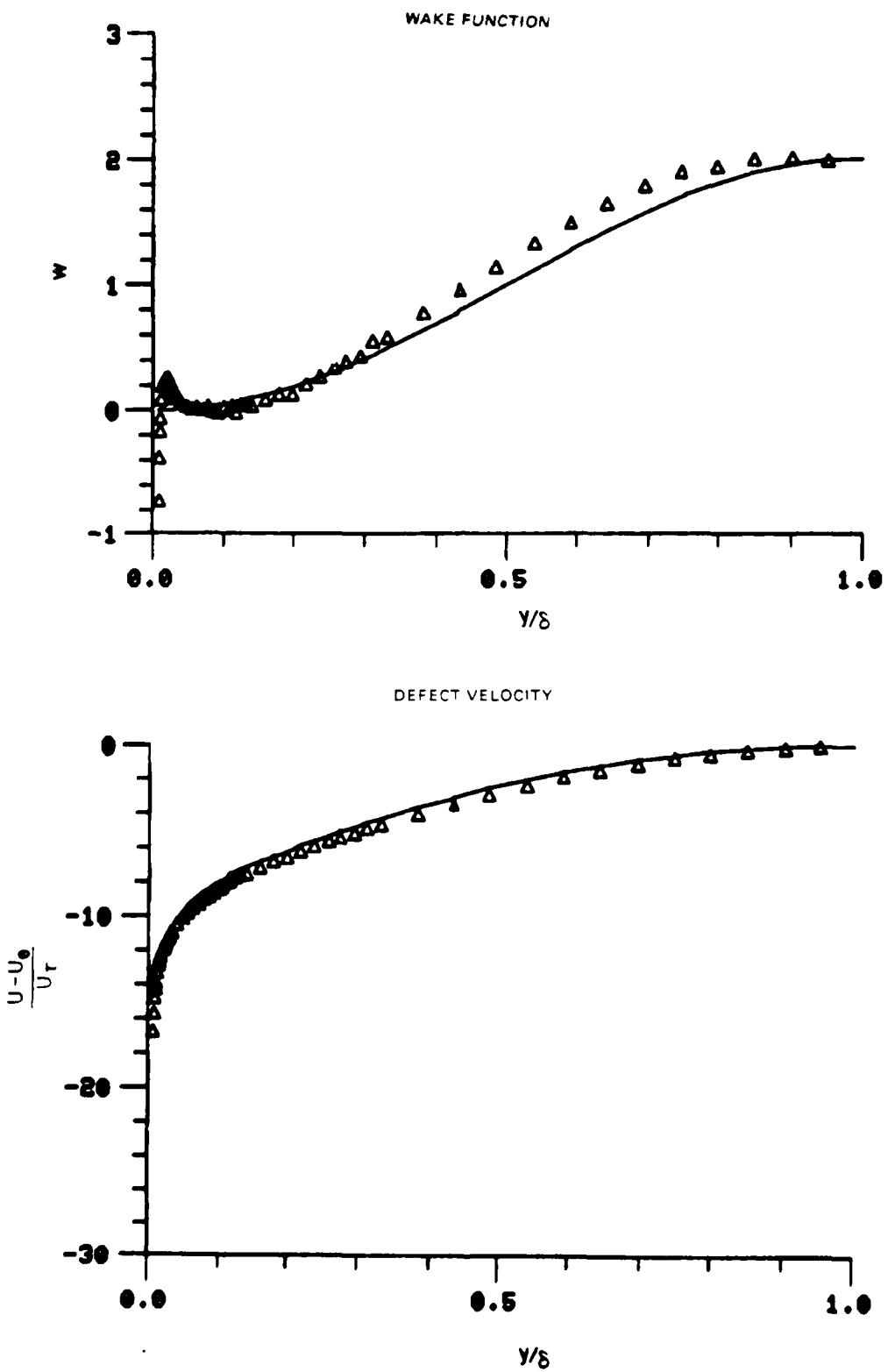


Figure 25. Boundary Layer Velocity Profiles
Run No. 8 Point No. 15

78-12-100-2

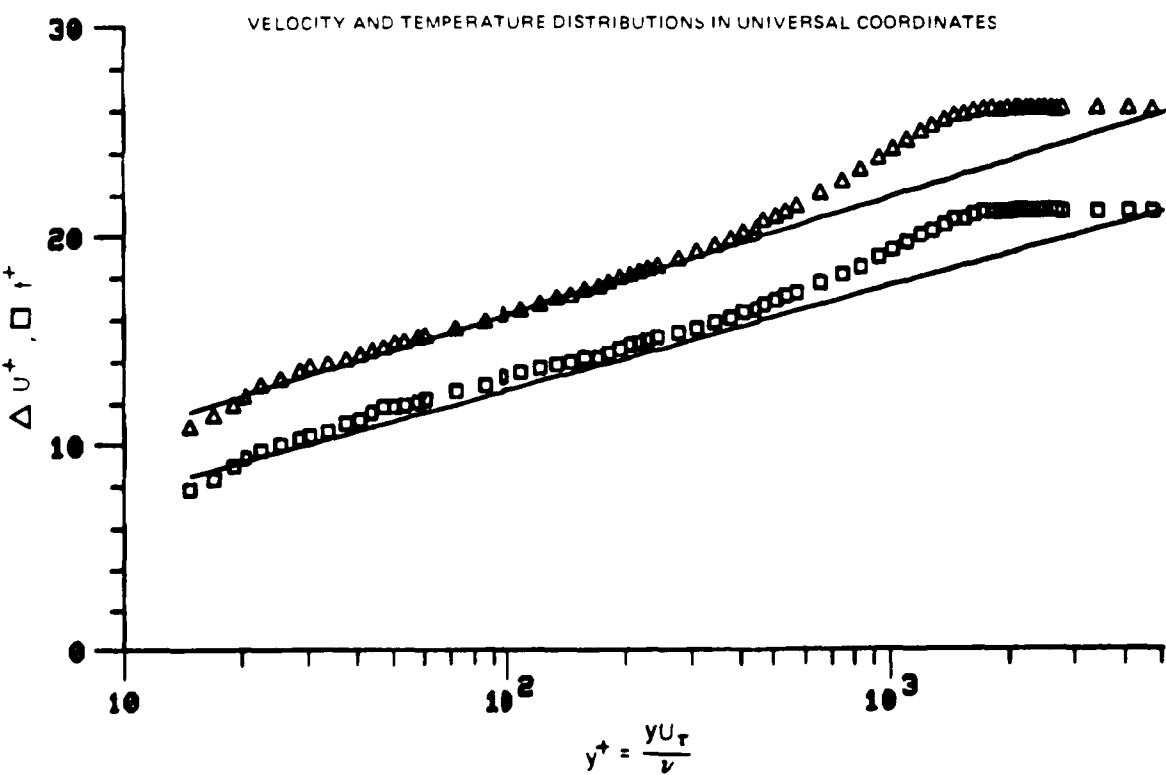
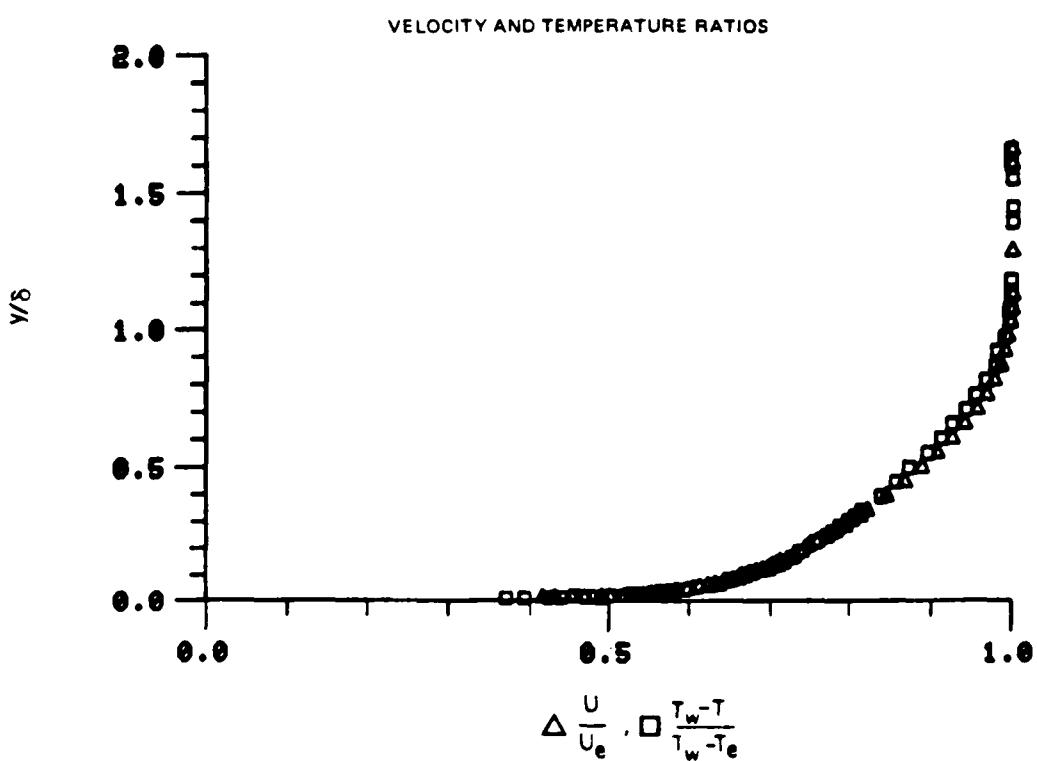


Figure 26. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 16

78-12-100-1

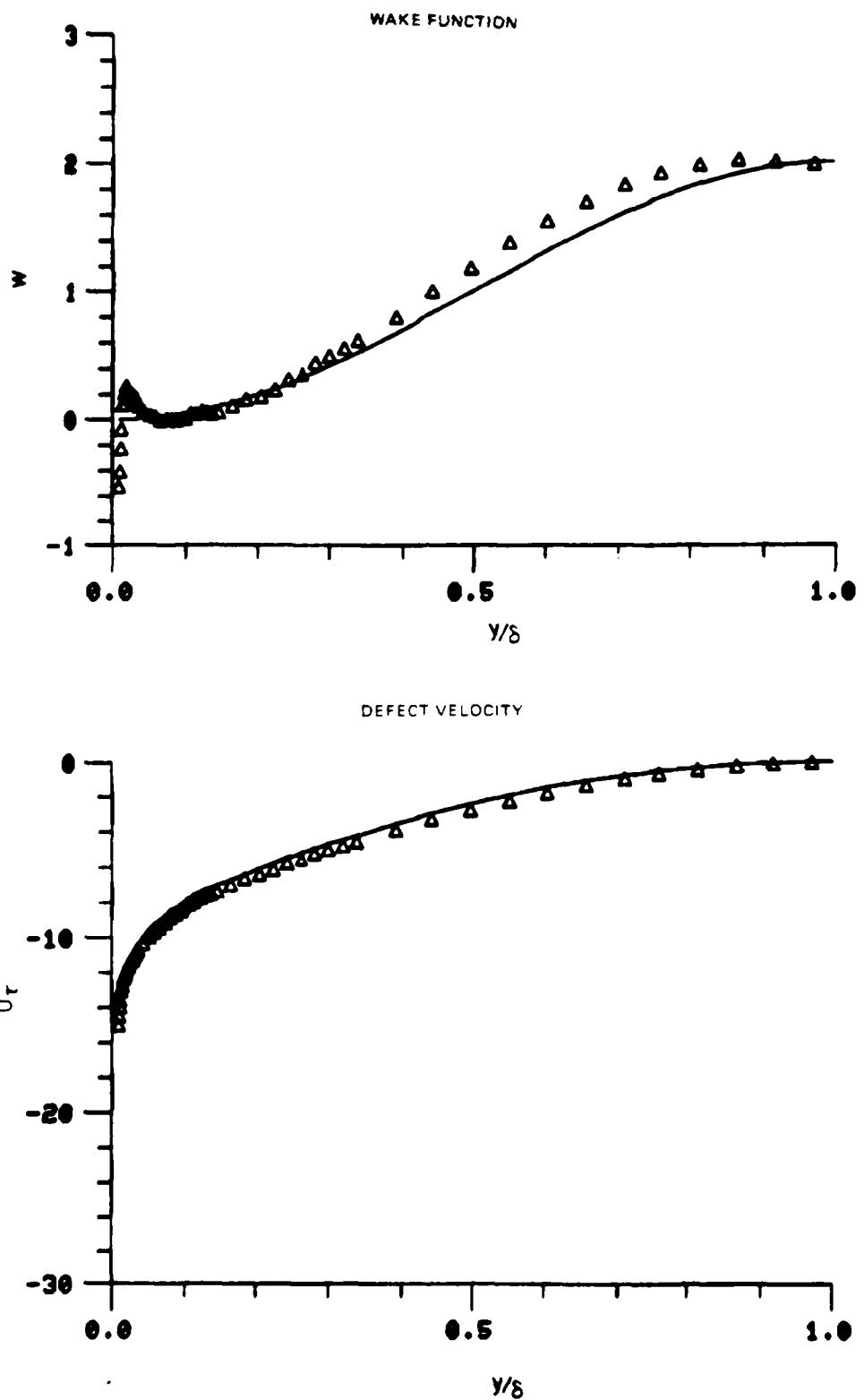


Figure 26. Boundary Layer Velocity Profiles
Run No. 8 Point No. 16

78-12-100-2

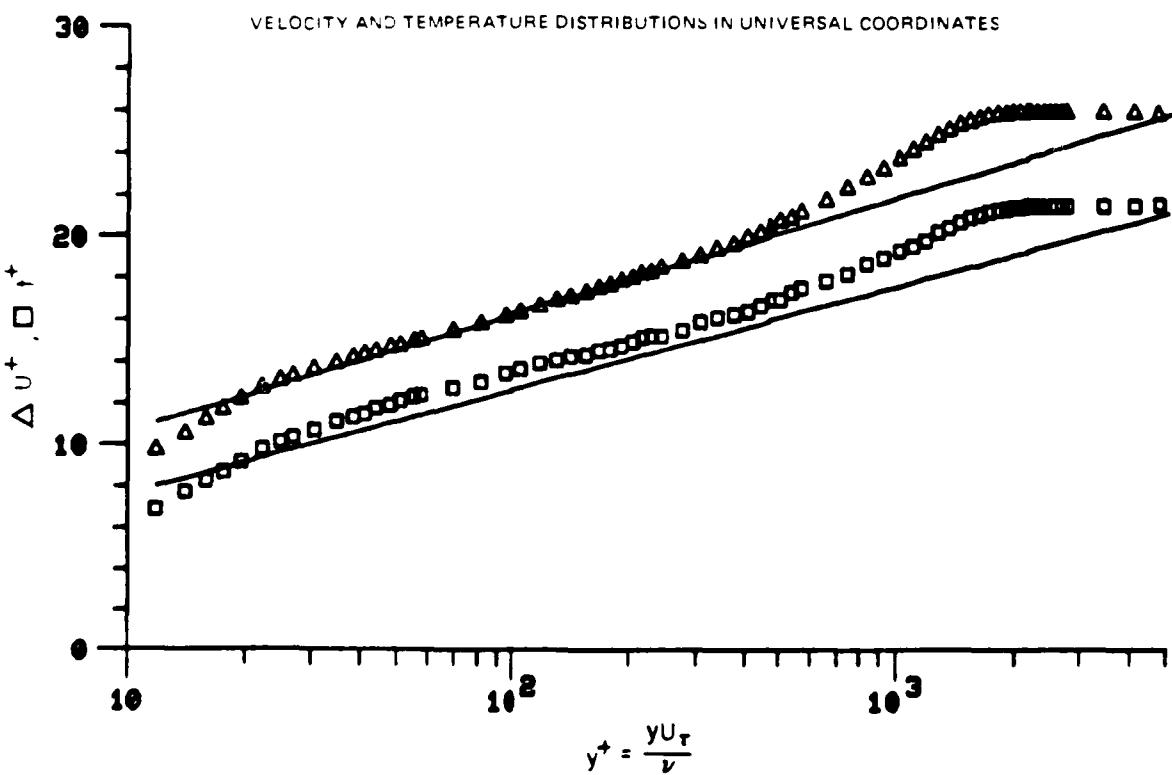
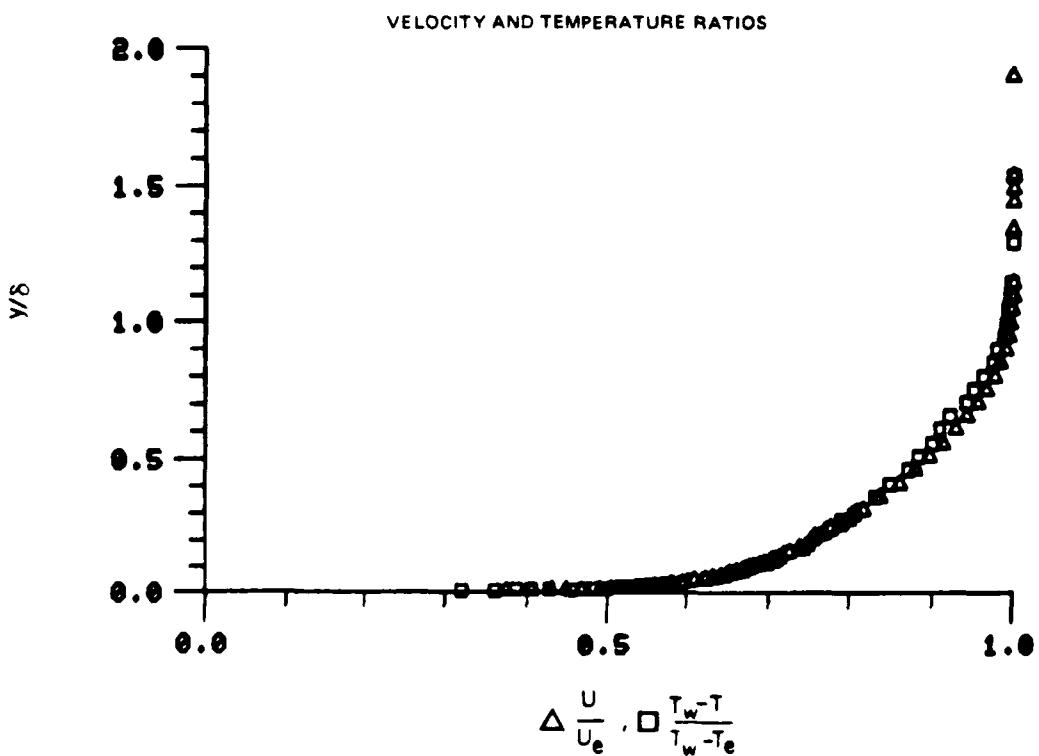


Figure 27. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 17

78-12-100-1

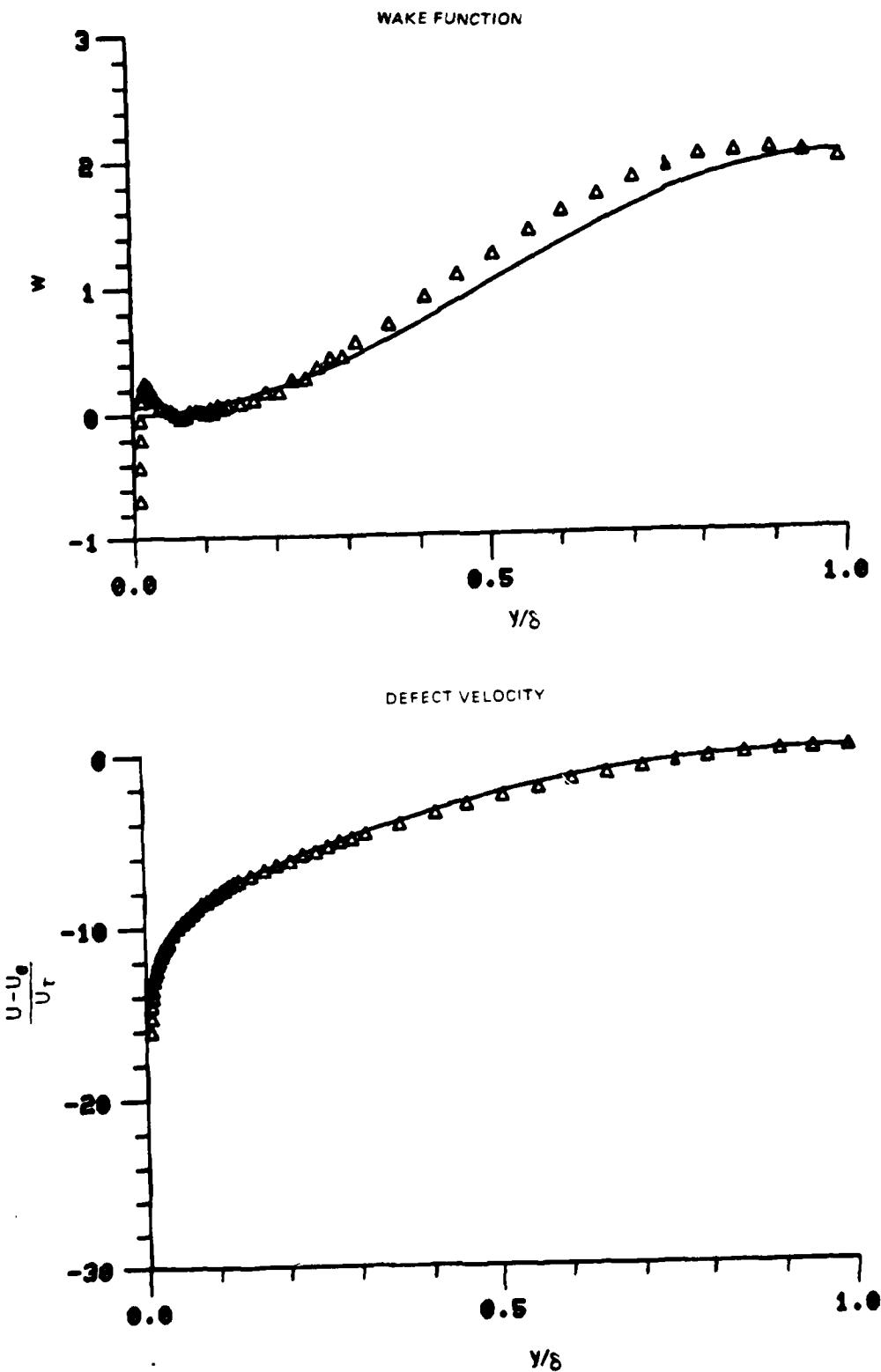


Figure 27. Boundary Layer Velocity Profiles
Run No.8 Point No.17

78-12-100-2

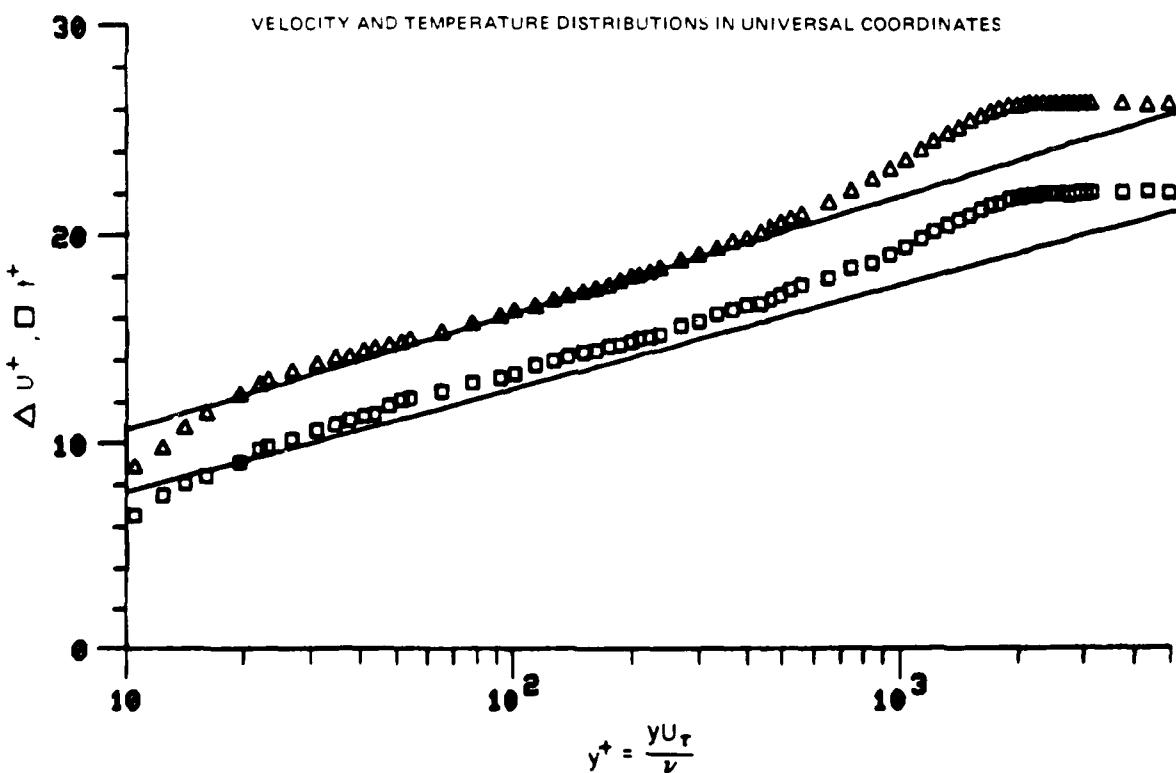
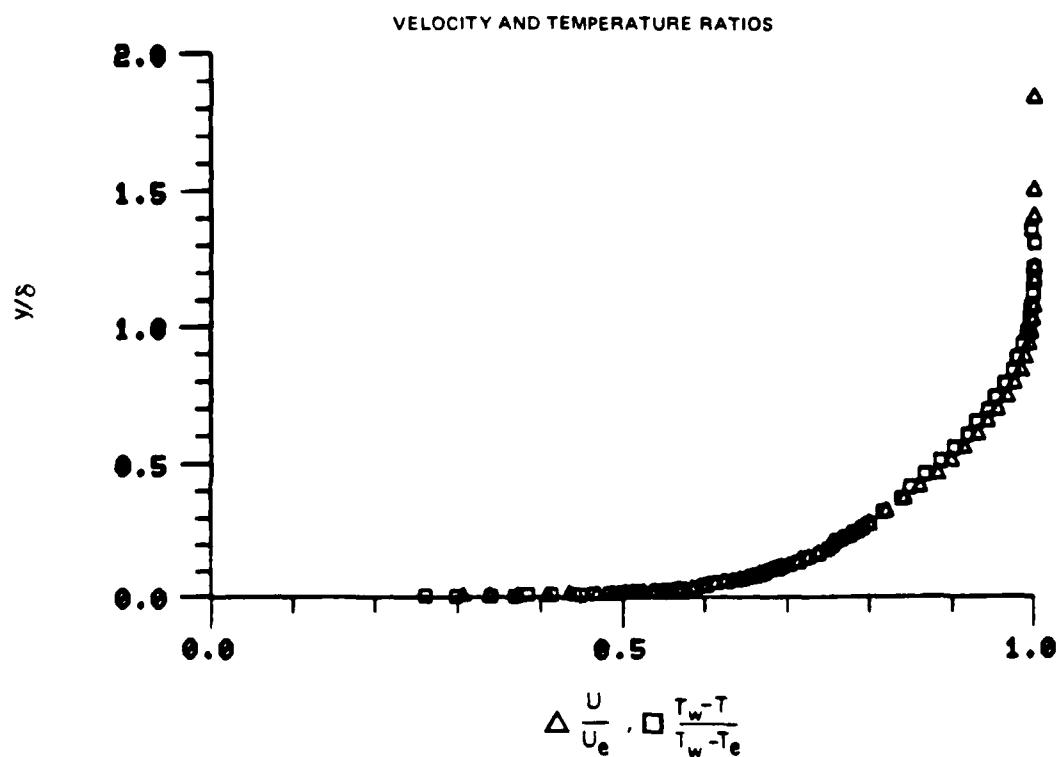


Figure 28. Boundary Layer Velocity and Temperature Profiles
Run No.8 Point No.18

78-12-100-1

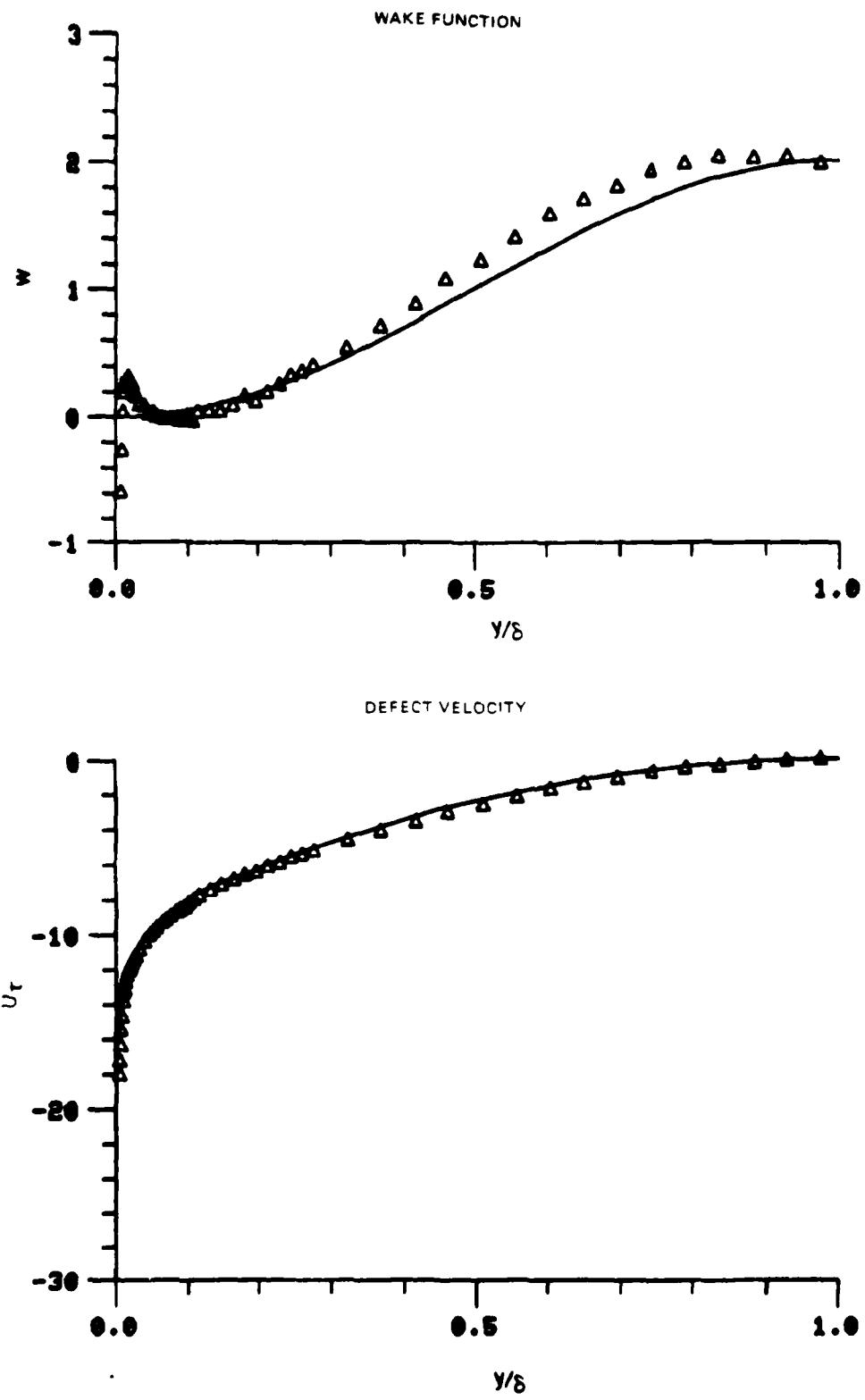


Figure 28. Boundary Layer Velocity Profiles
Run No. 8 Point No. 18

78-12-100-2

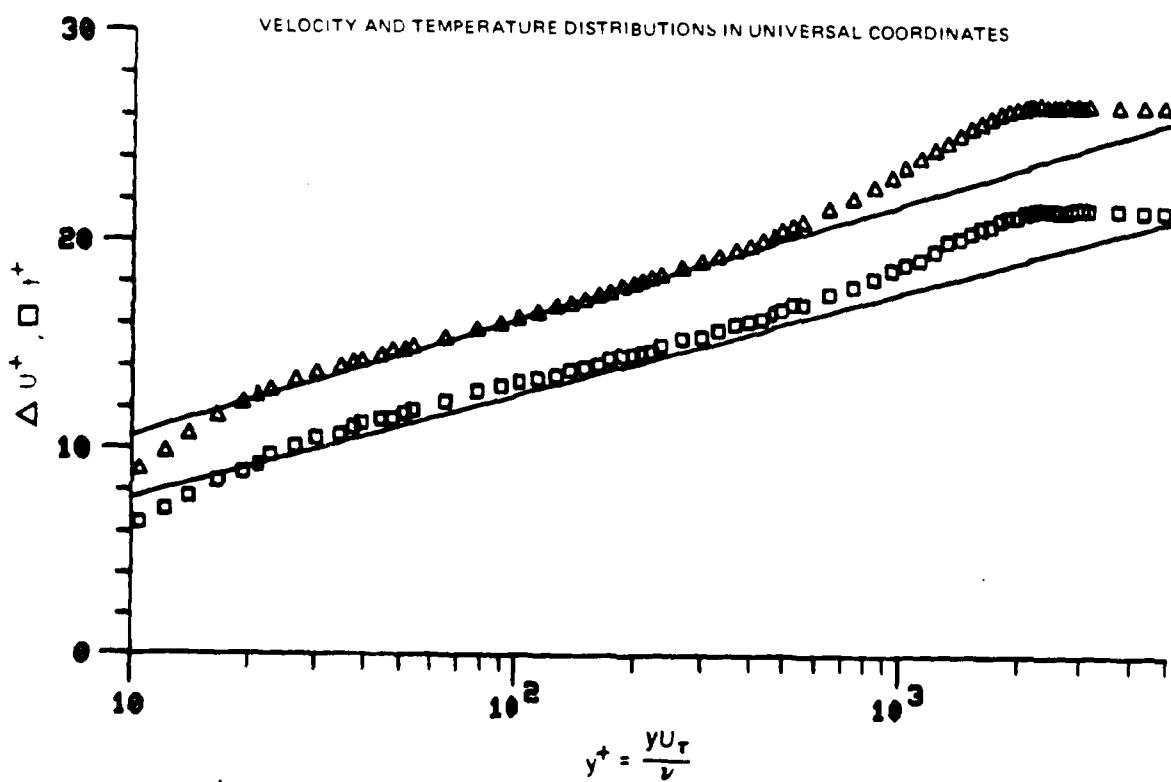
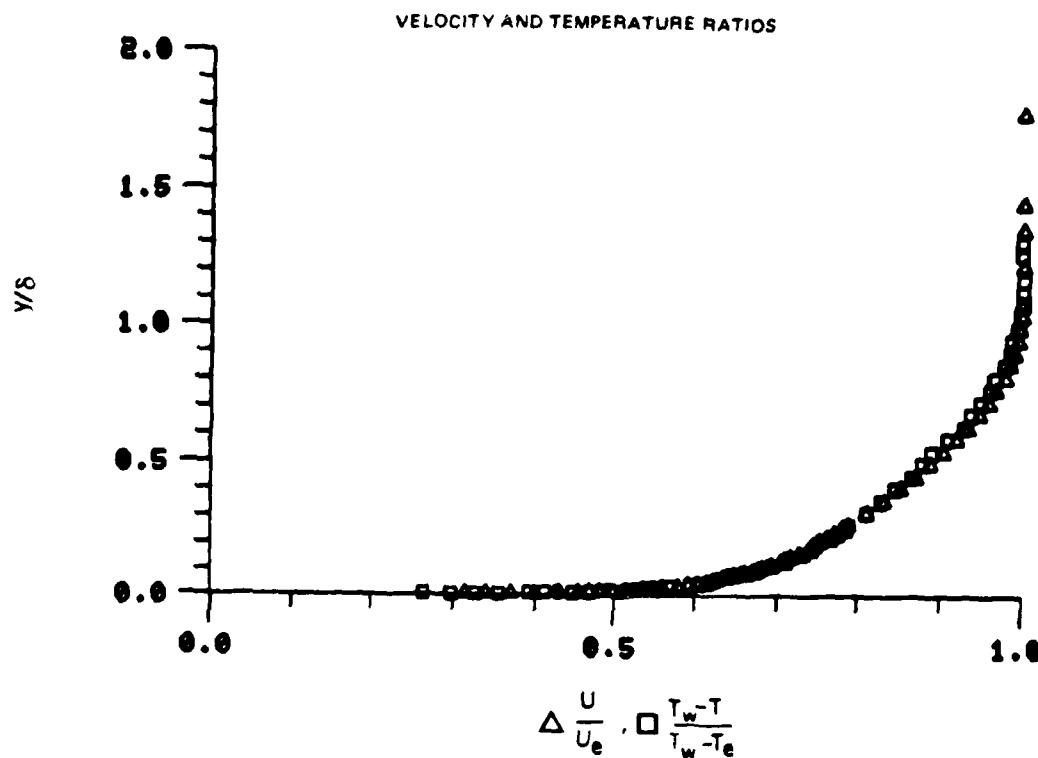


Figure 29. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 20

78-12-100-1

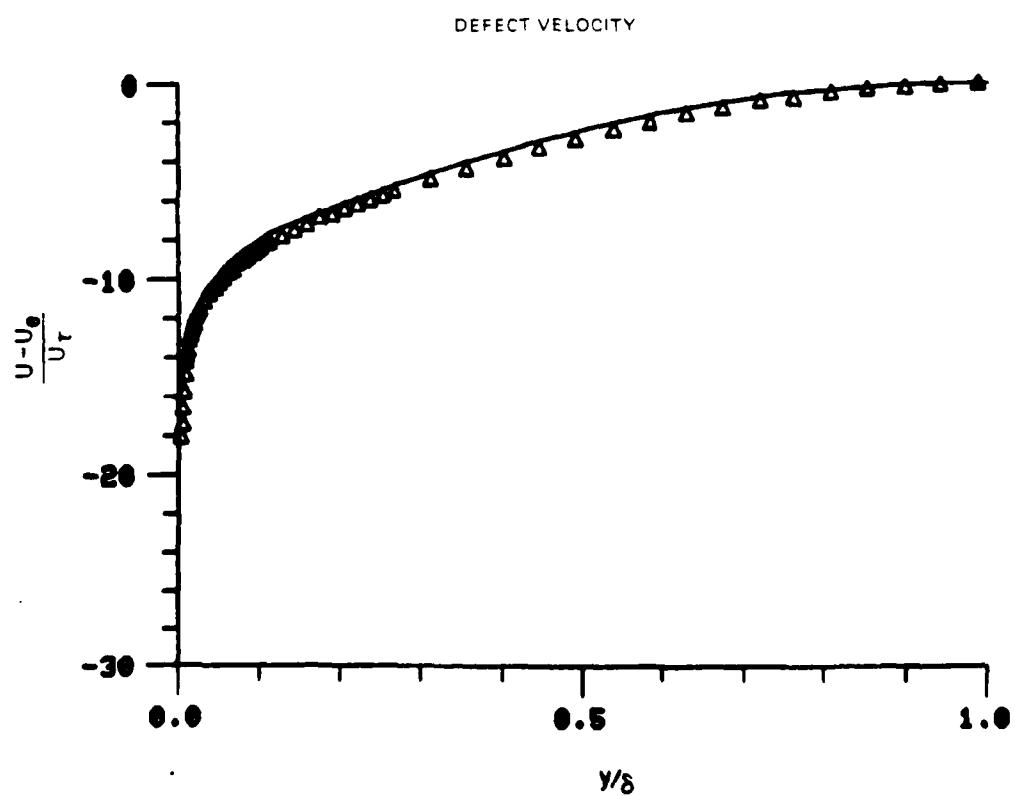
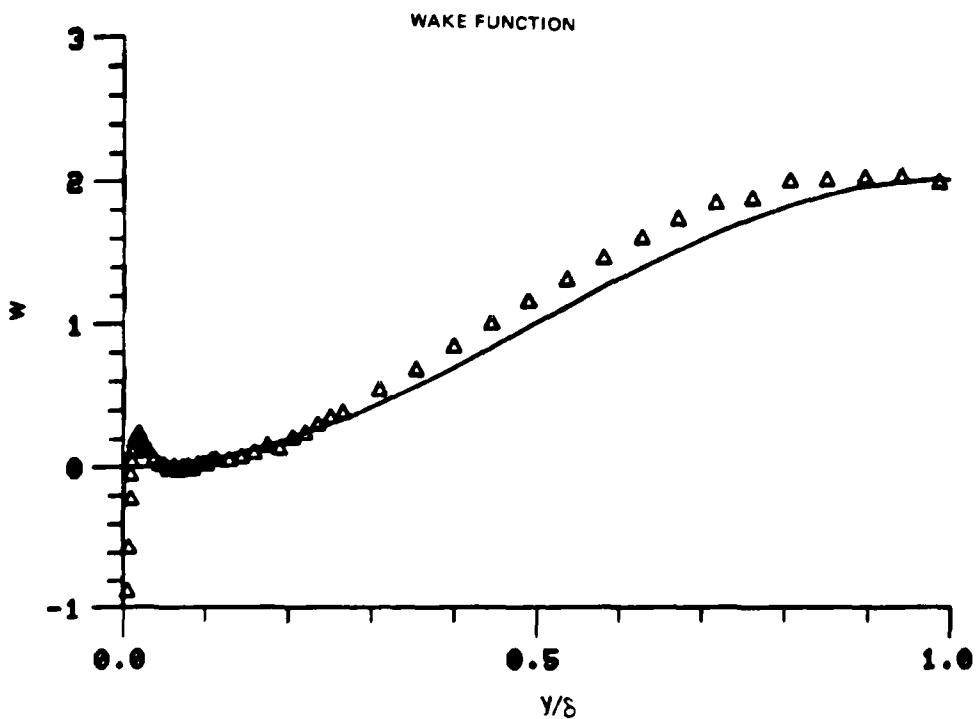


Figure 29. Boundary Layer Velocity Profiles
Run No. 8 Point No. 20

78-12-100-2

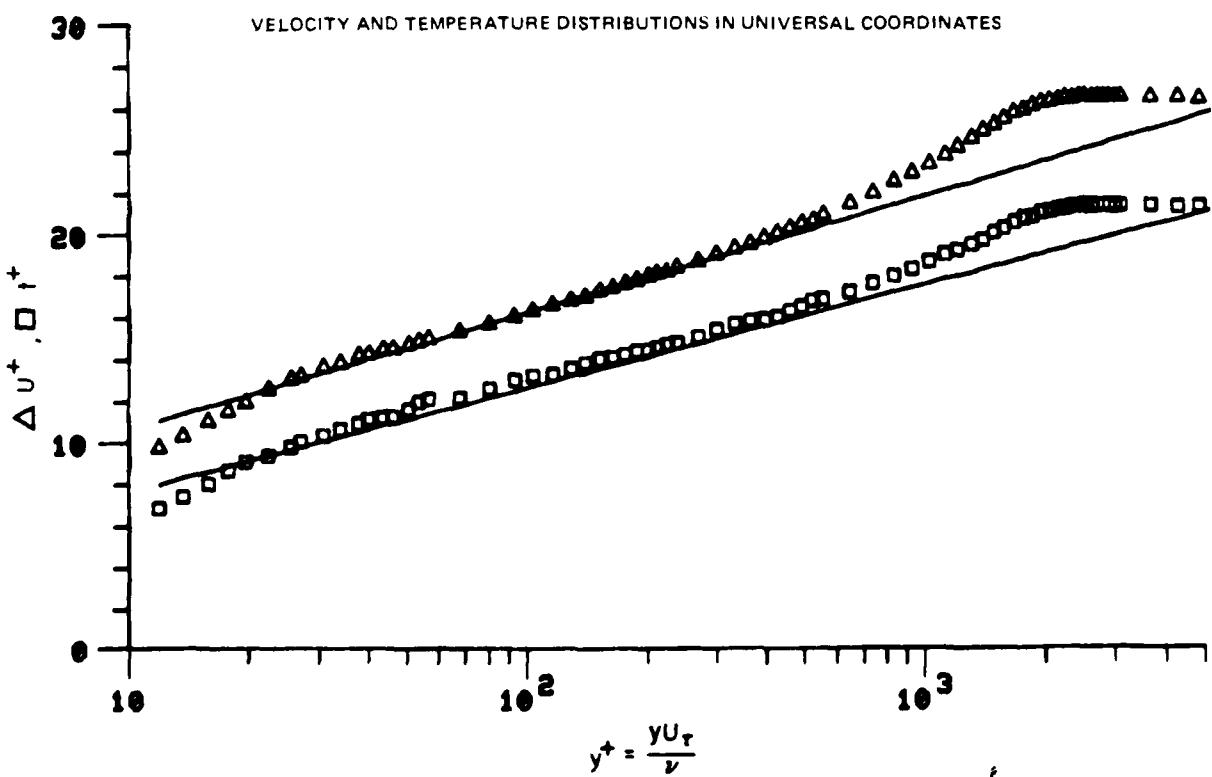
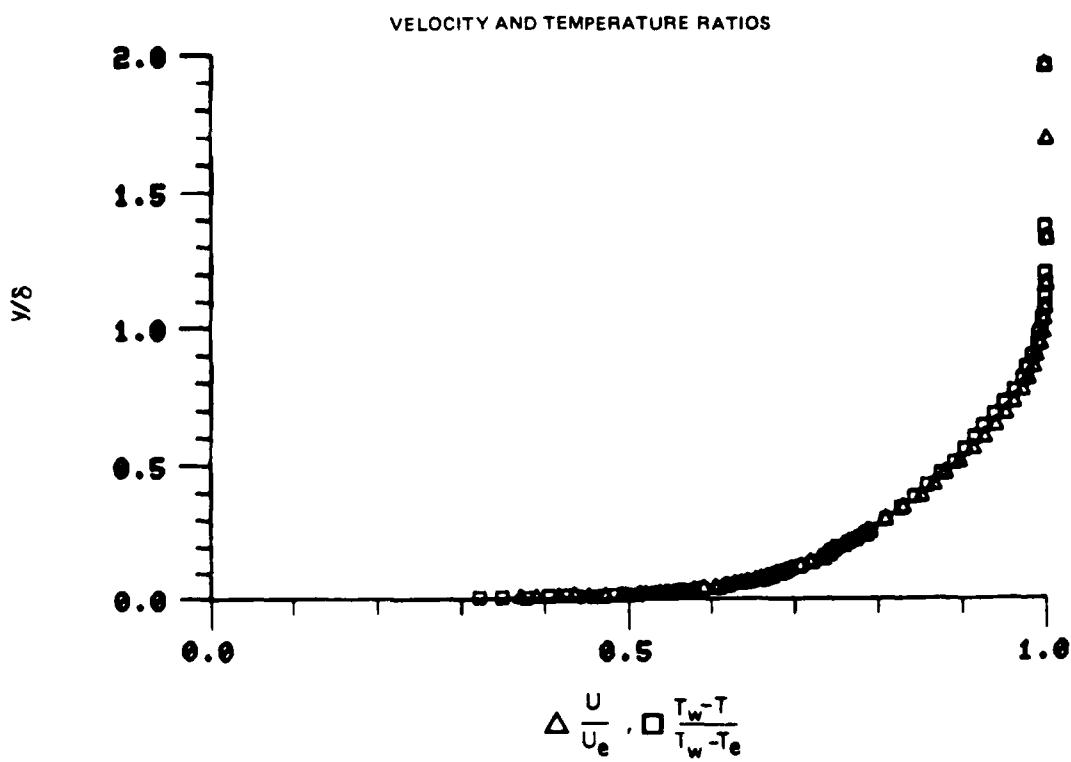


Figure 30. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 21

78-12-100-1

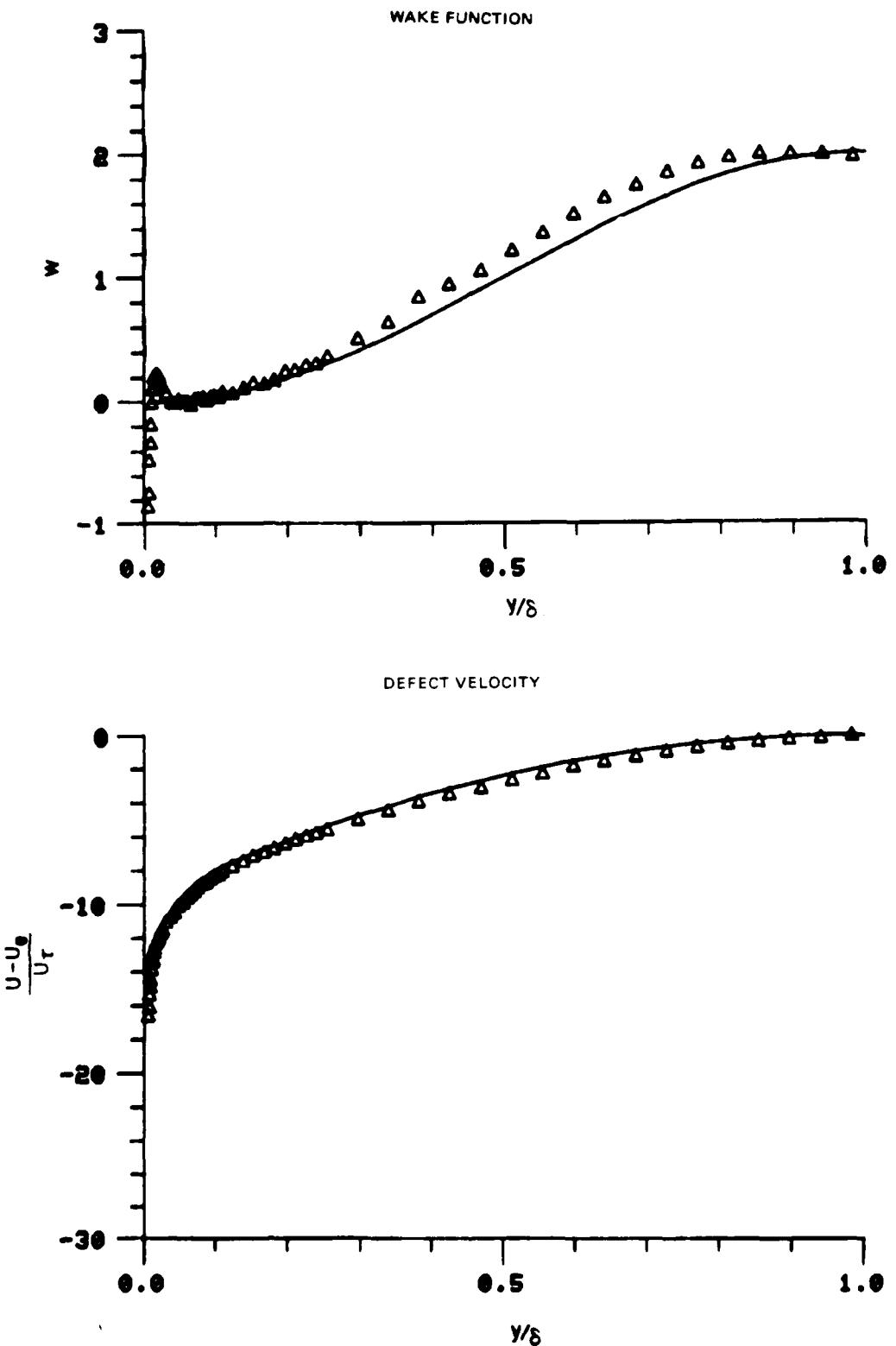


Figure 30. Boundary Layer Velocity Profiles
Run No.8 Point No.21

78-12-100-2

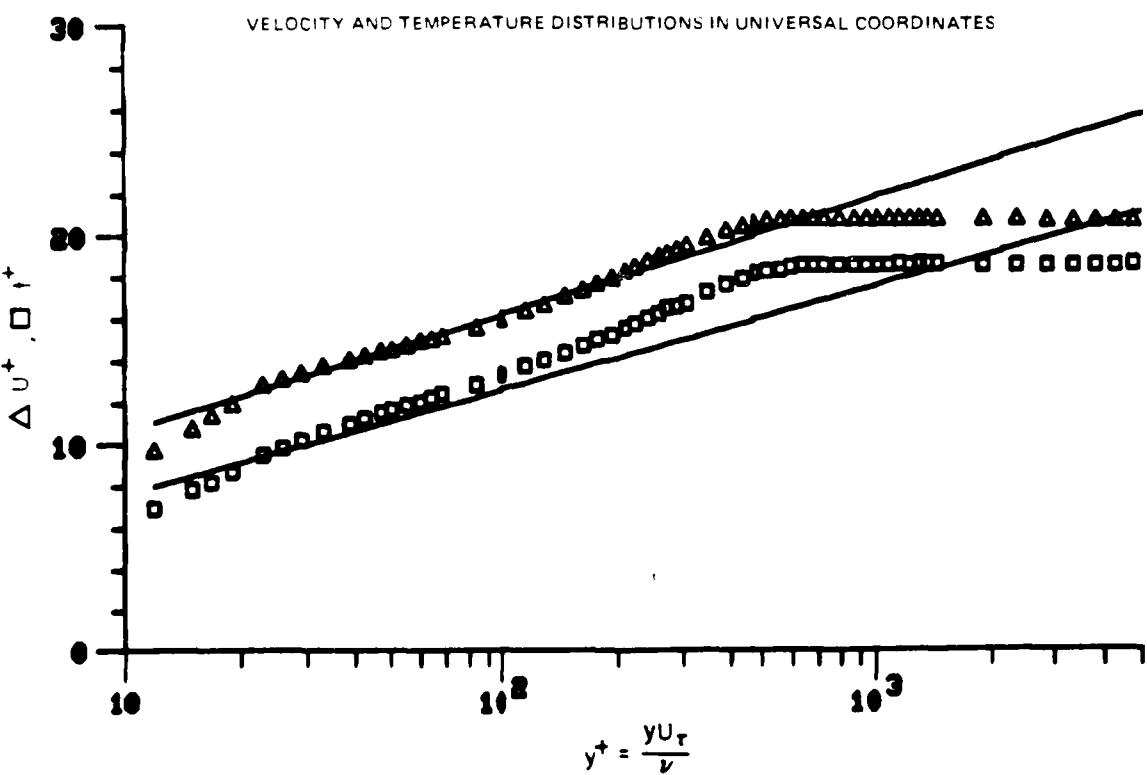
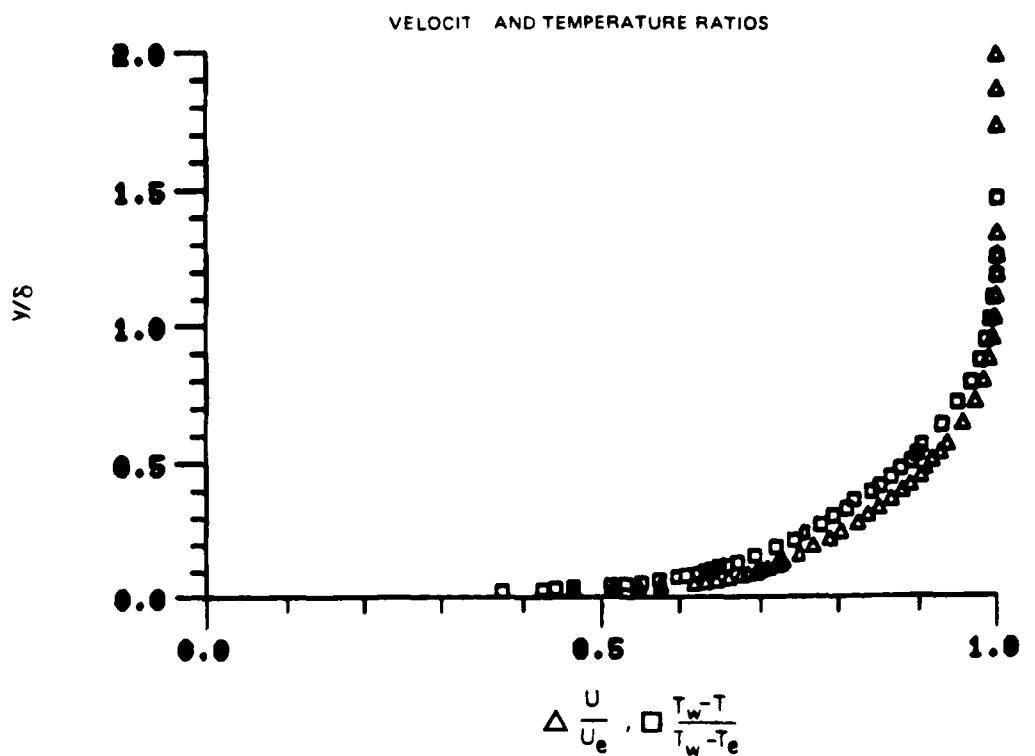


Figure 31. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 3

78-12-100-1

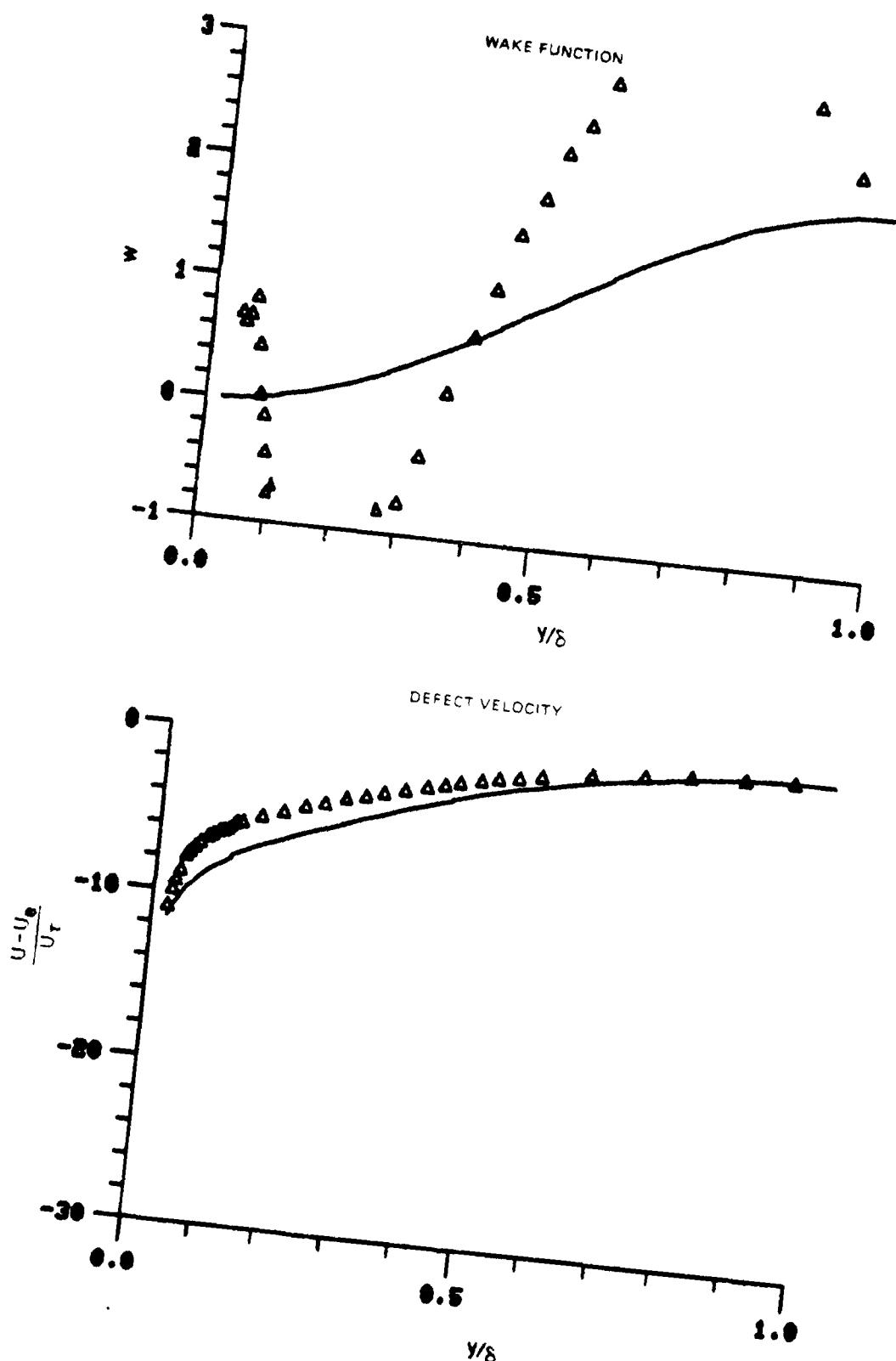


Figure 31. Boundary Layer Velocity Profiles
Run No. 7 Point No. 3

78-12-100-2

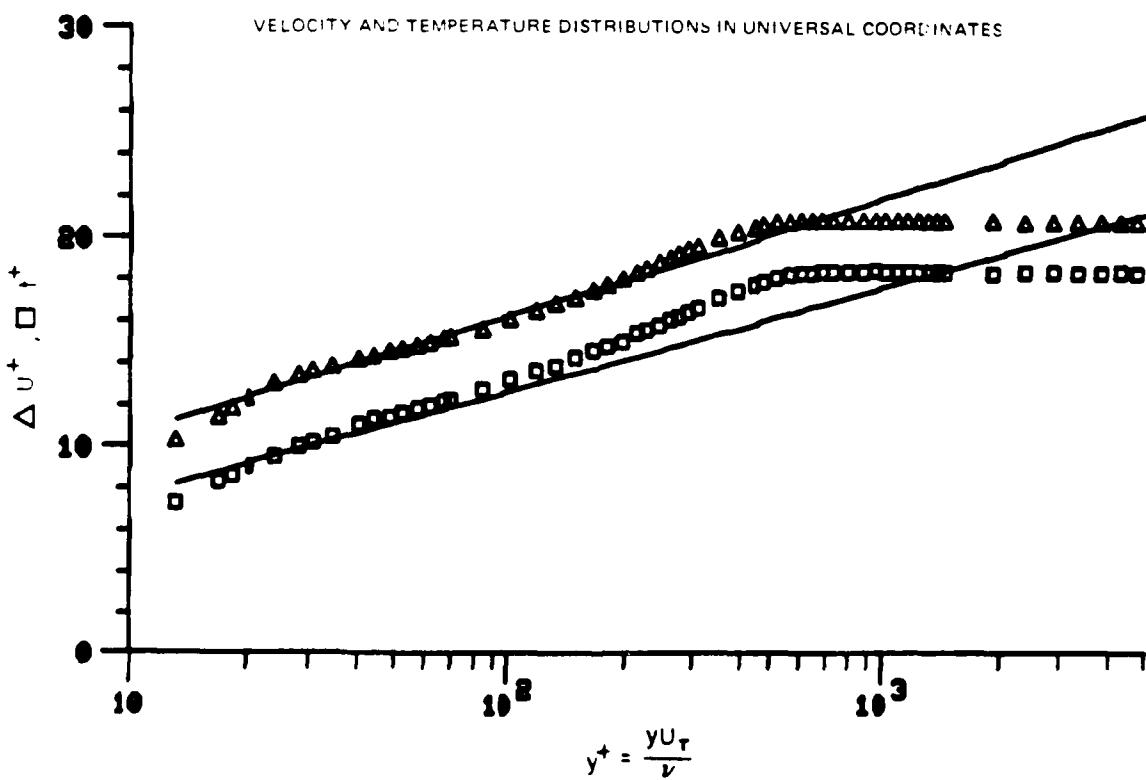
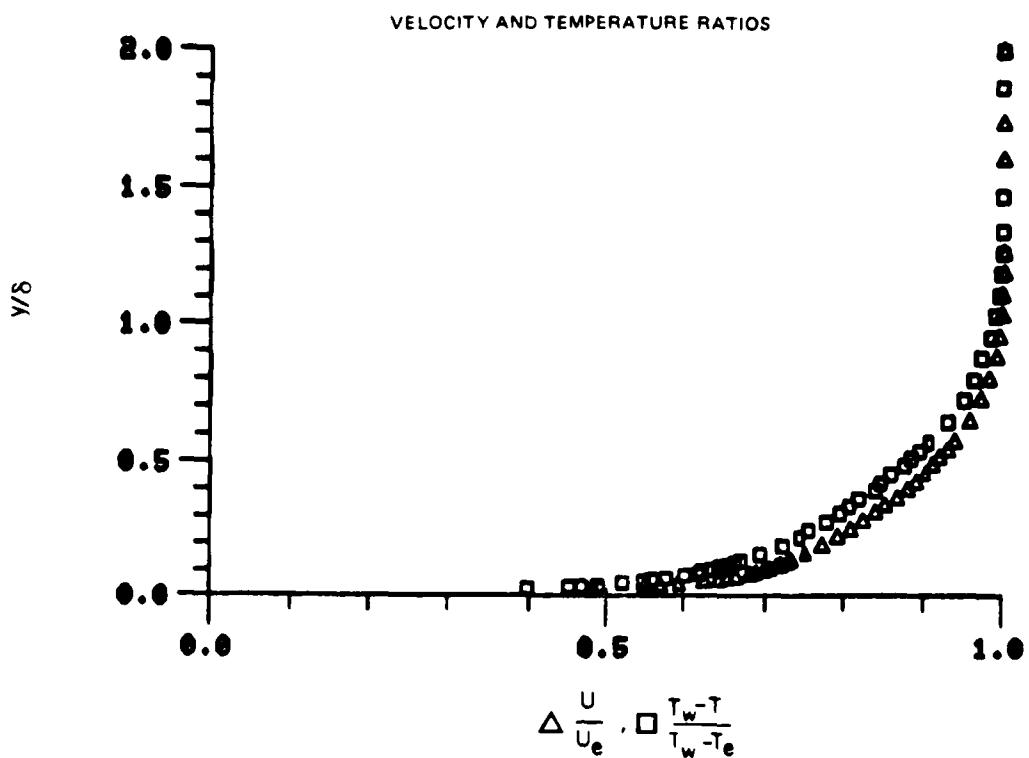


Figure 32. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 4

78-12-100-1

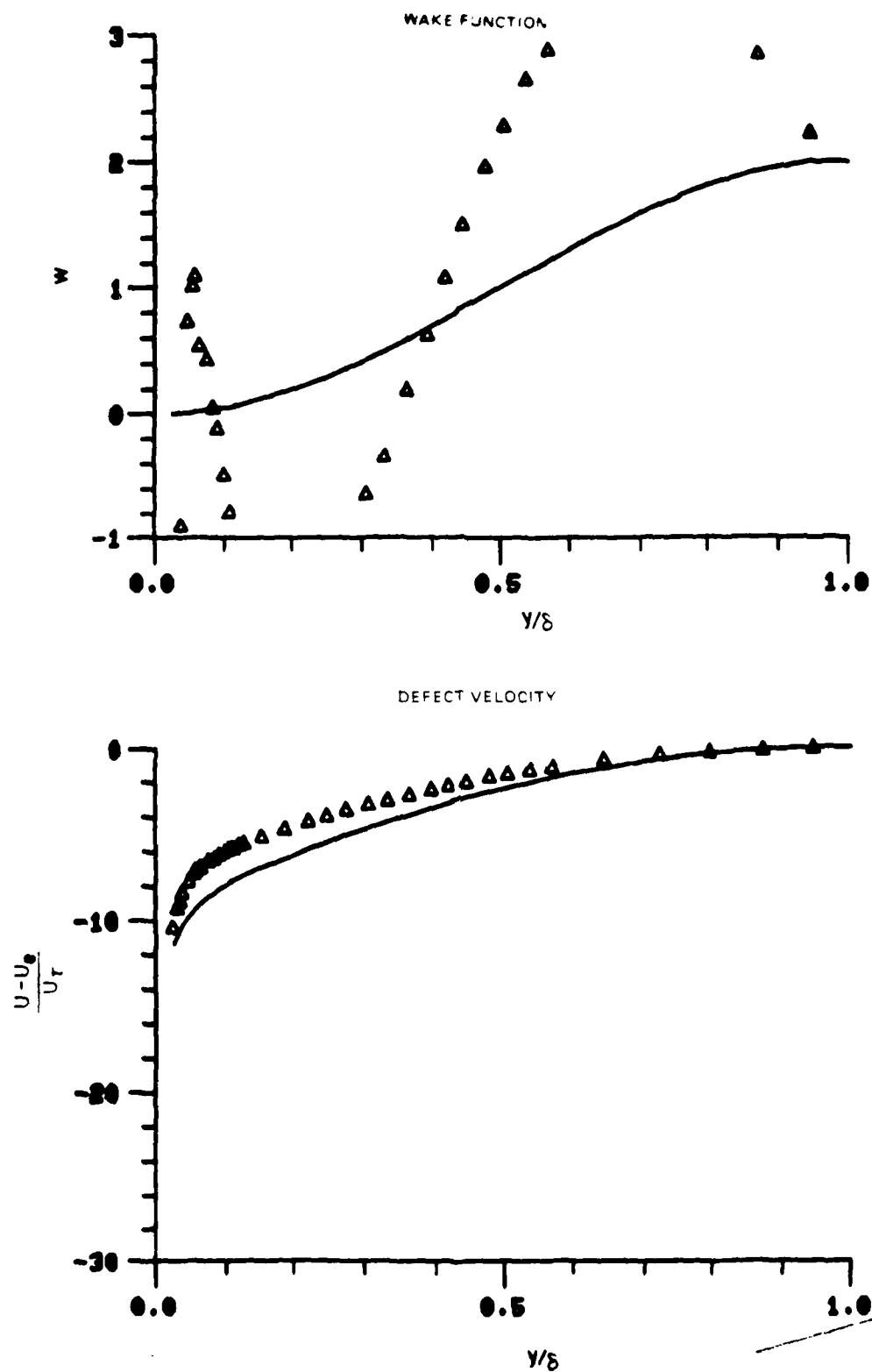


Figure 32. Boundary Layer Velocity Profiles
Run No.7 Point No.4

78-12-100-2

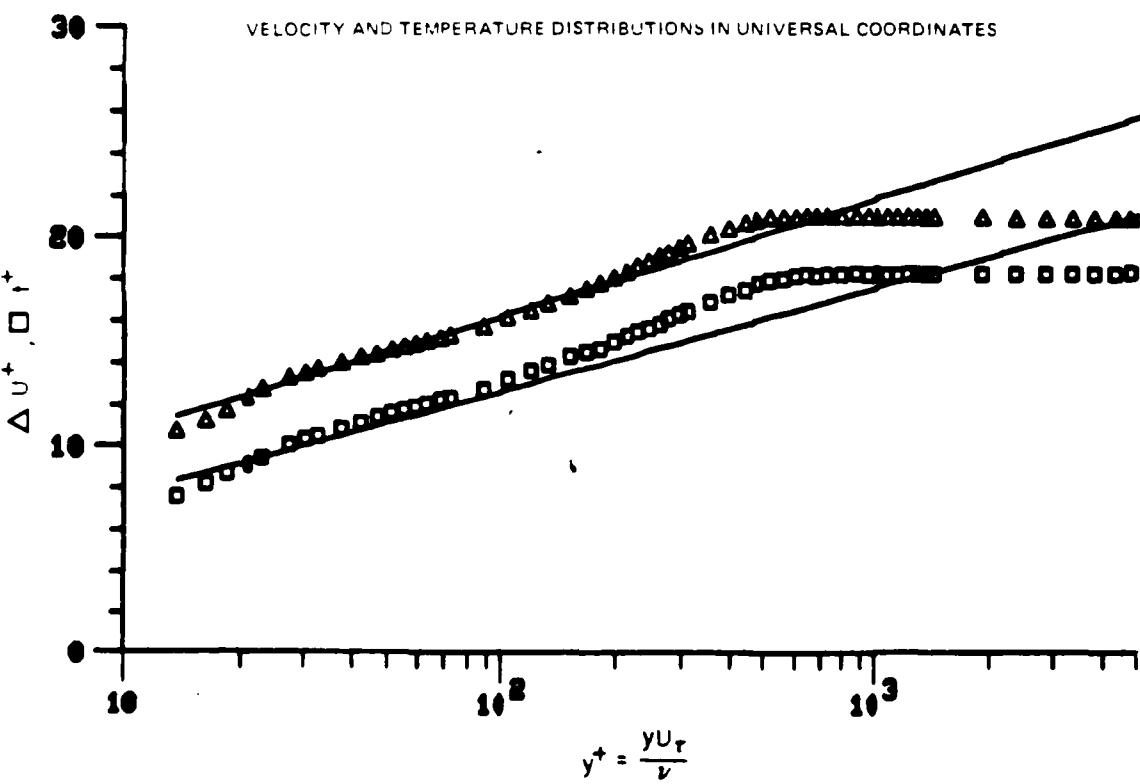
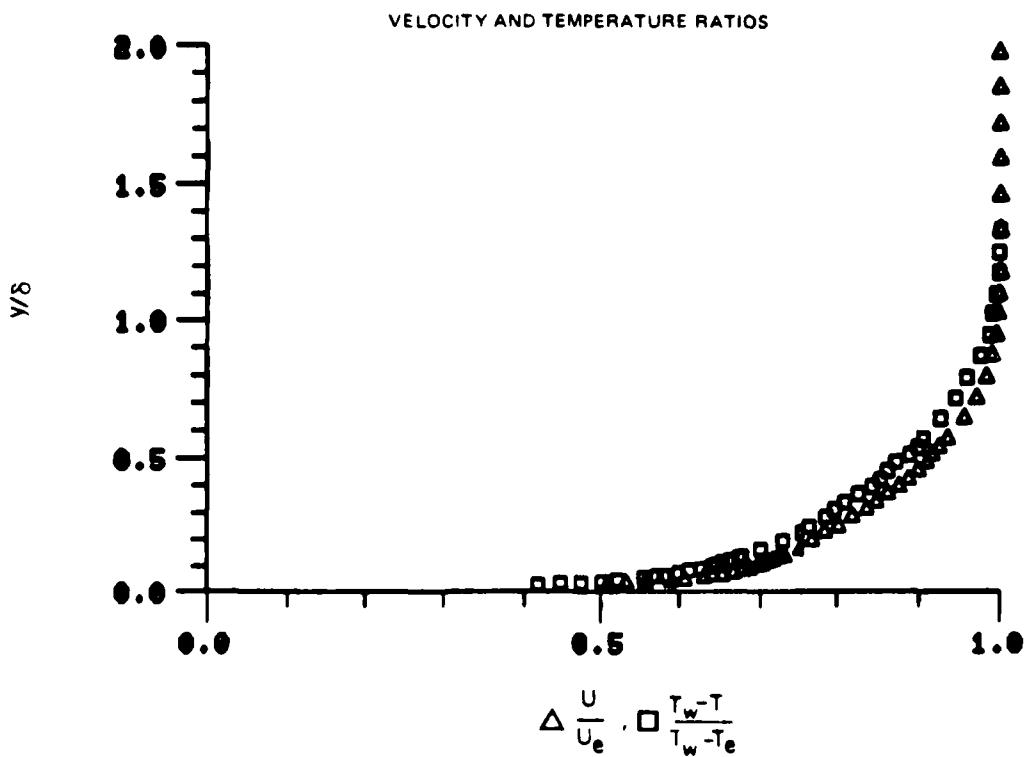


Figure 33. Boundary Layer Velocity and Temperature Profiles
Run No.7 Point No.5

78-12-100-1

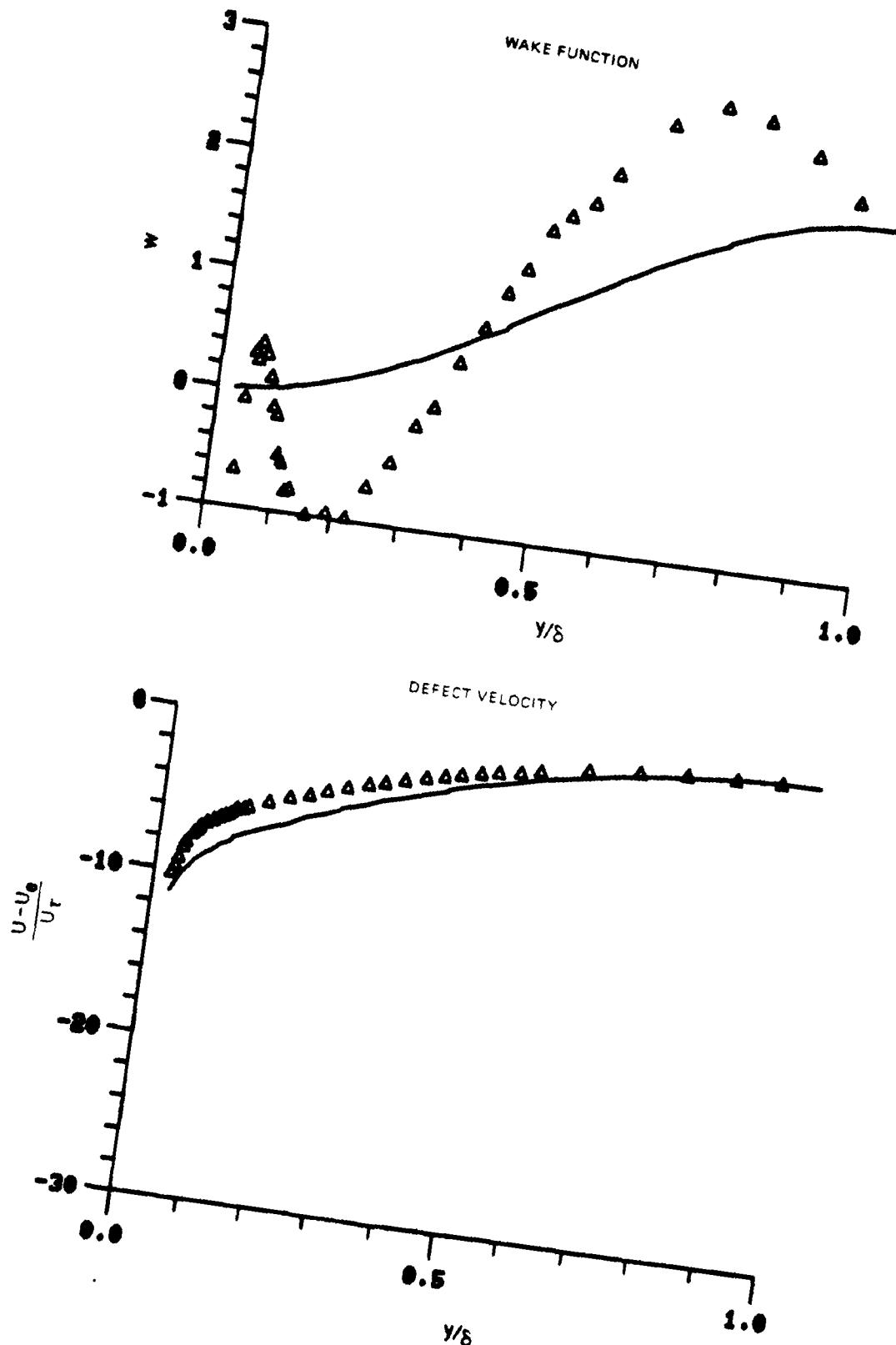


Figure 33. Boundary Layer Velocity Profiles
Run No. 7 Point No. 5

78-12-100-2

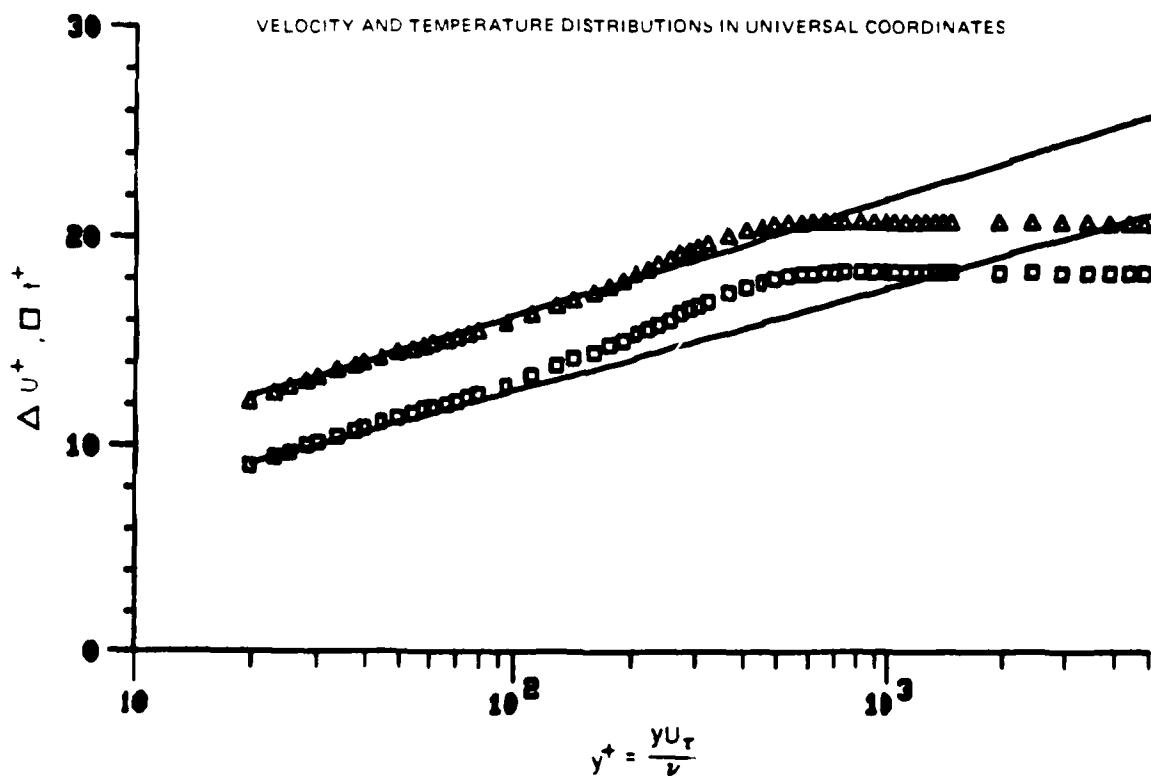
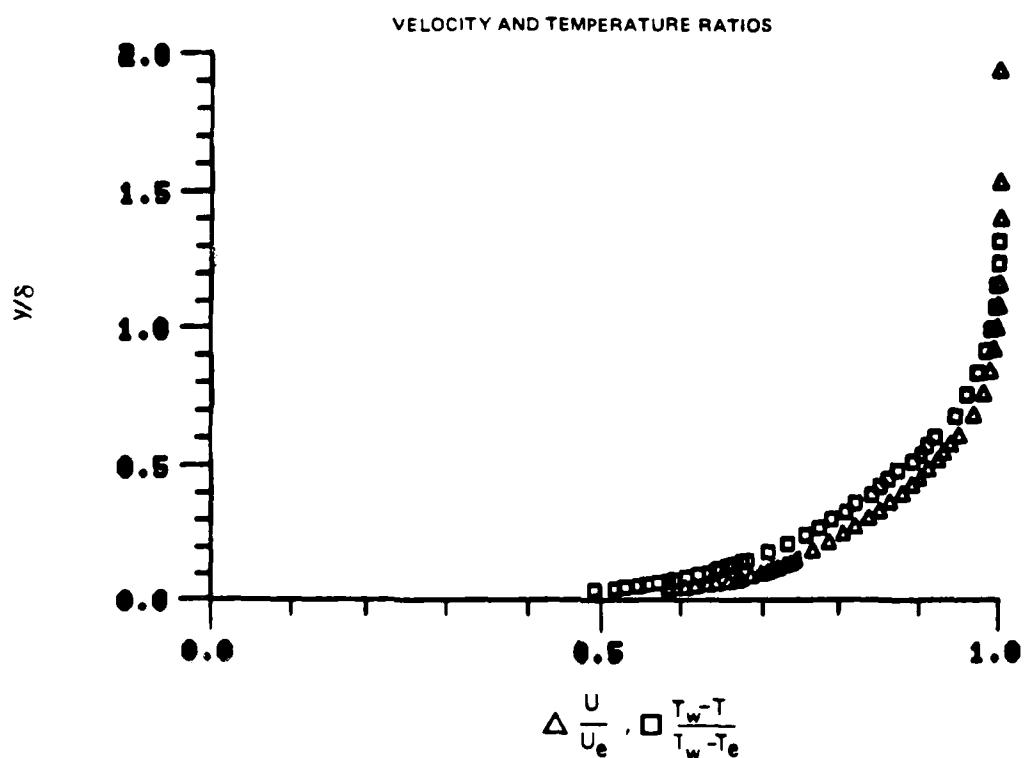


Figure 34. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 6

78-12-100-1

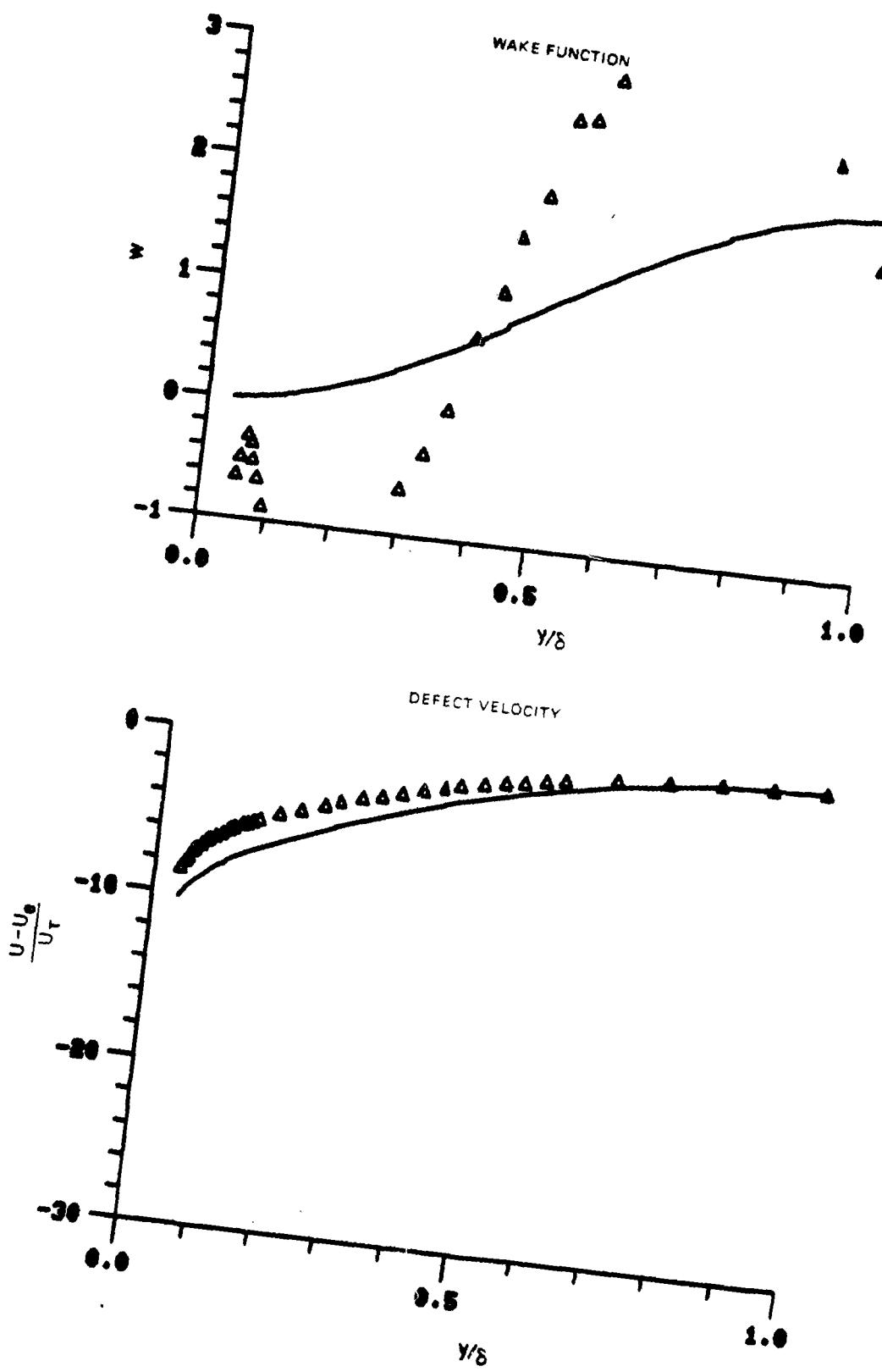


Figure 34. Boundary Layer Velocity Profiles
Run No. 7 Point No. 6

78-12-100-2

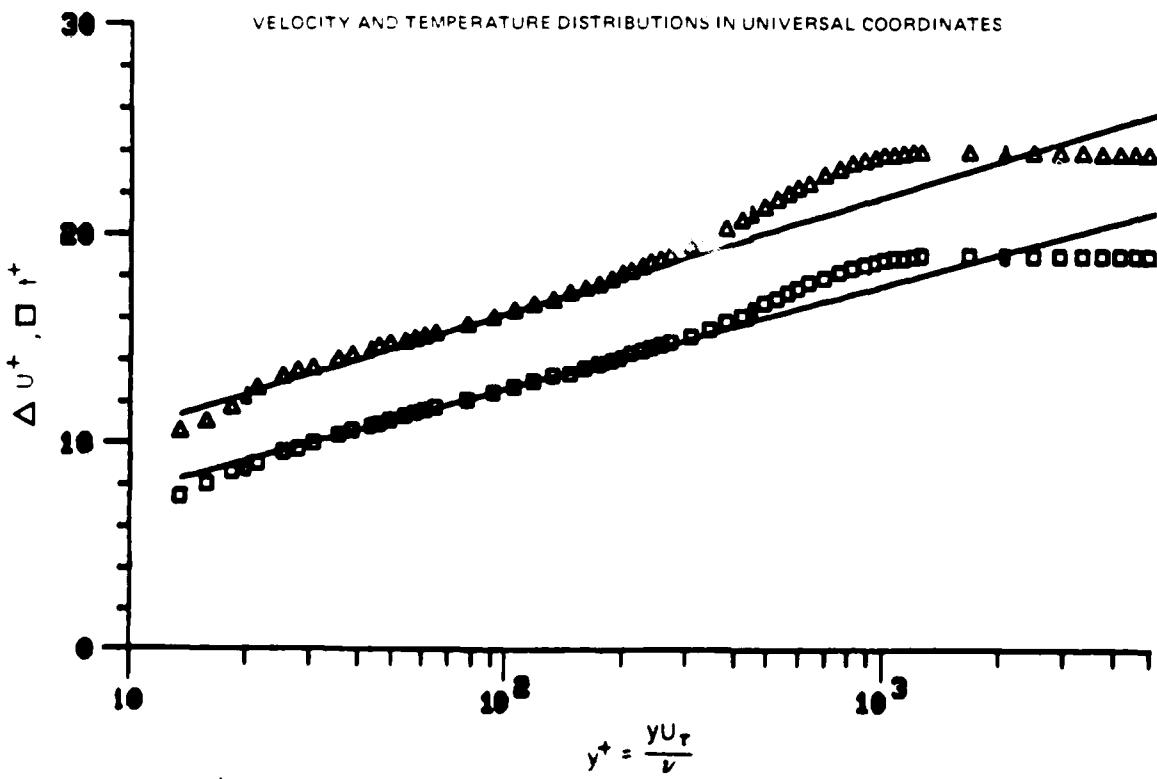
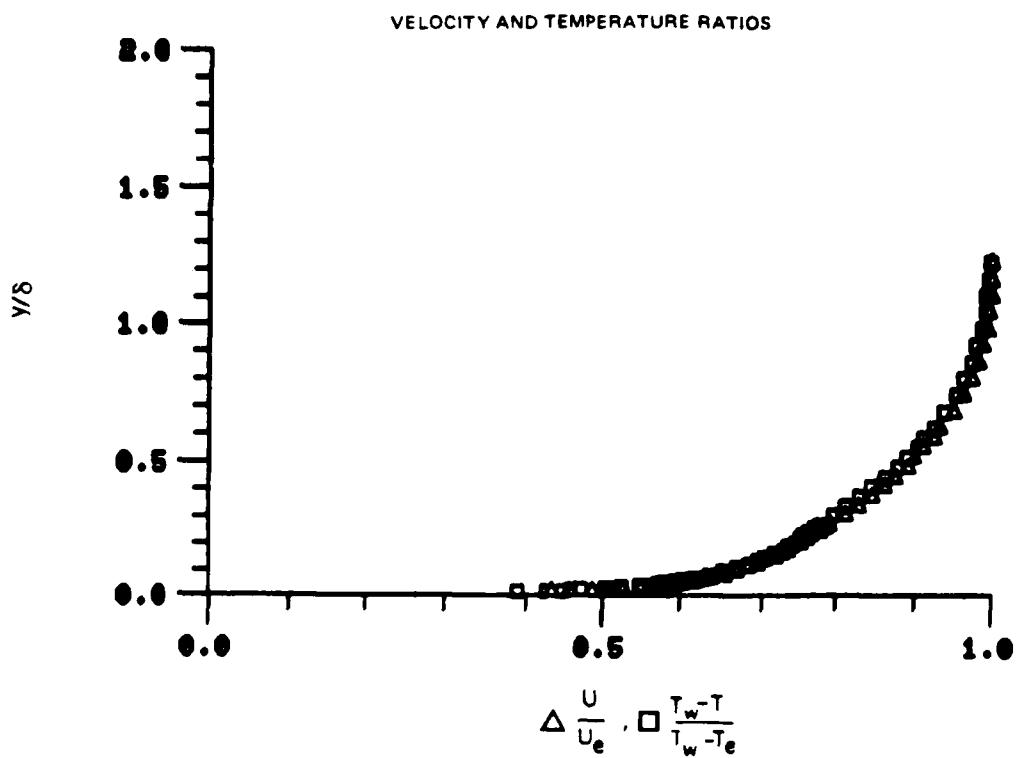


Figure 35. Boundary Layer Velocity and Temperature Profiles
Run No.7 Point No.8

78-12-100-1

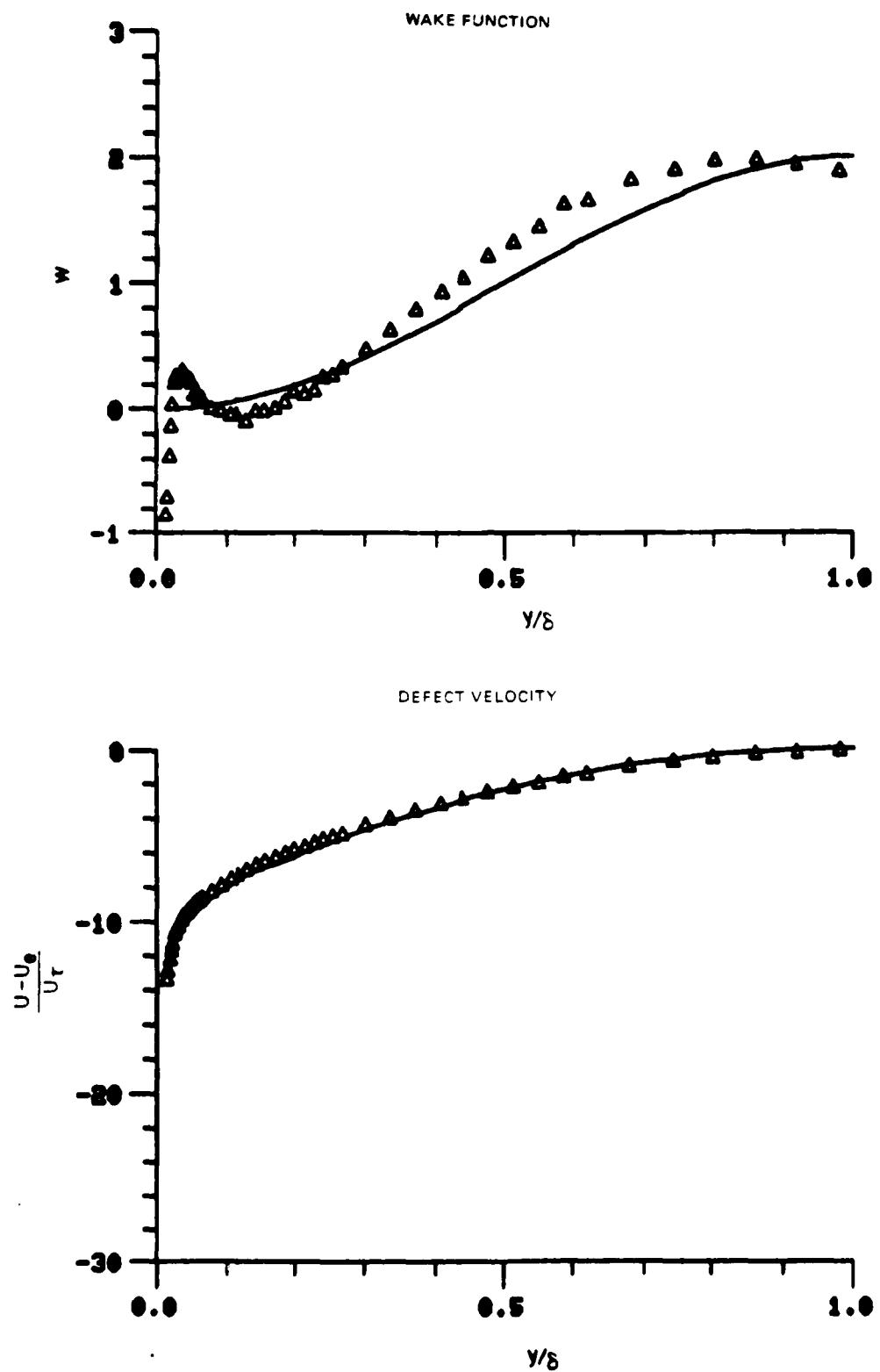


Figure 35. Boundary Layer Velocity Profiles
Run No. 7 Point No. 8

78-12-100-2

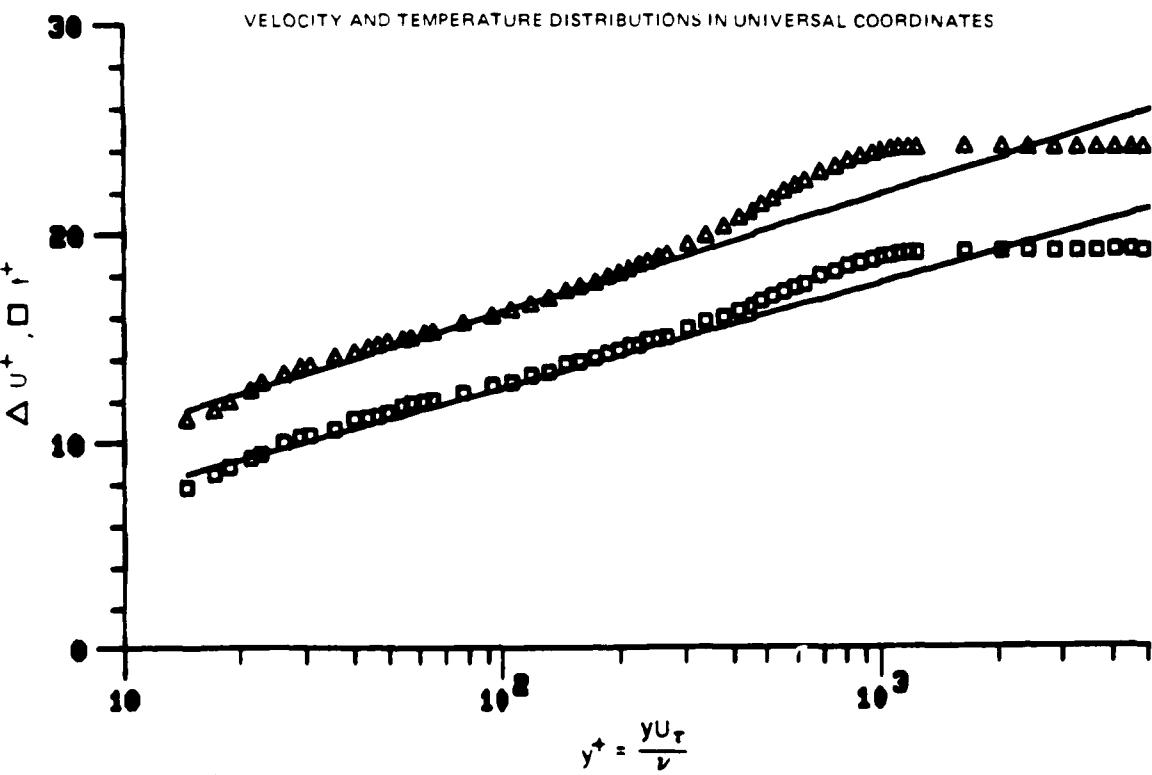
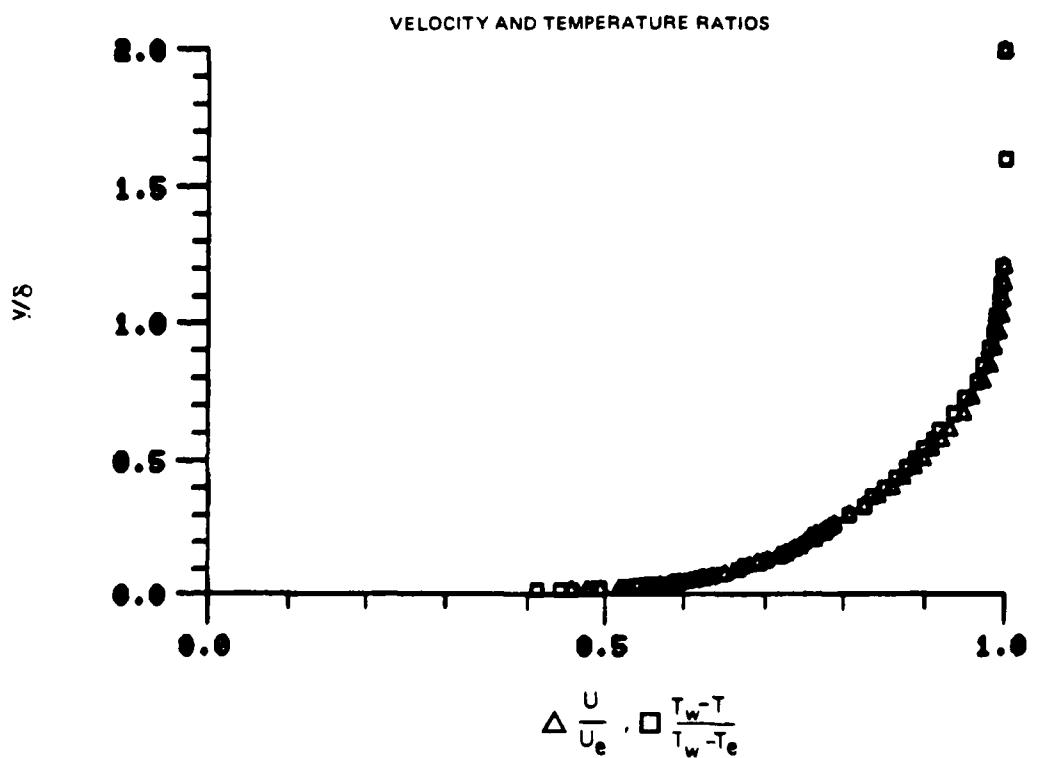


Figure 36. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 9

78-12-100-1

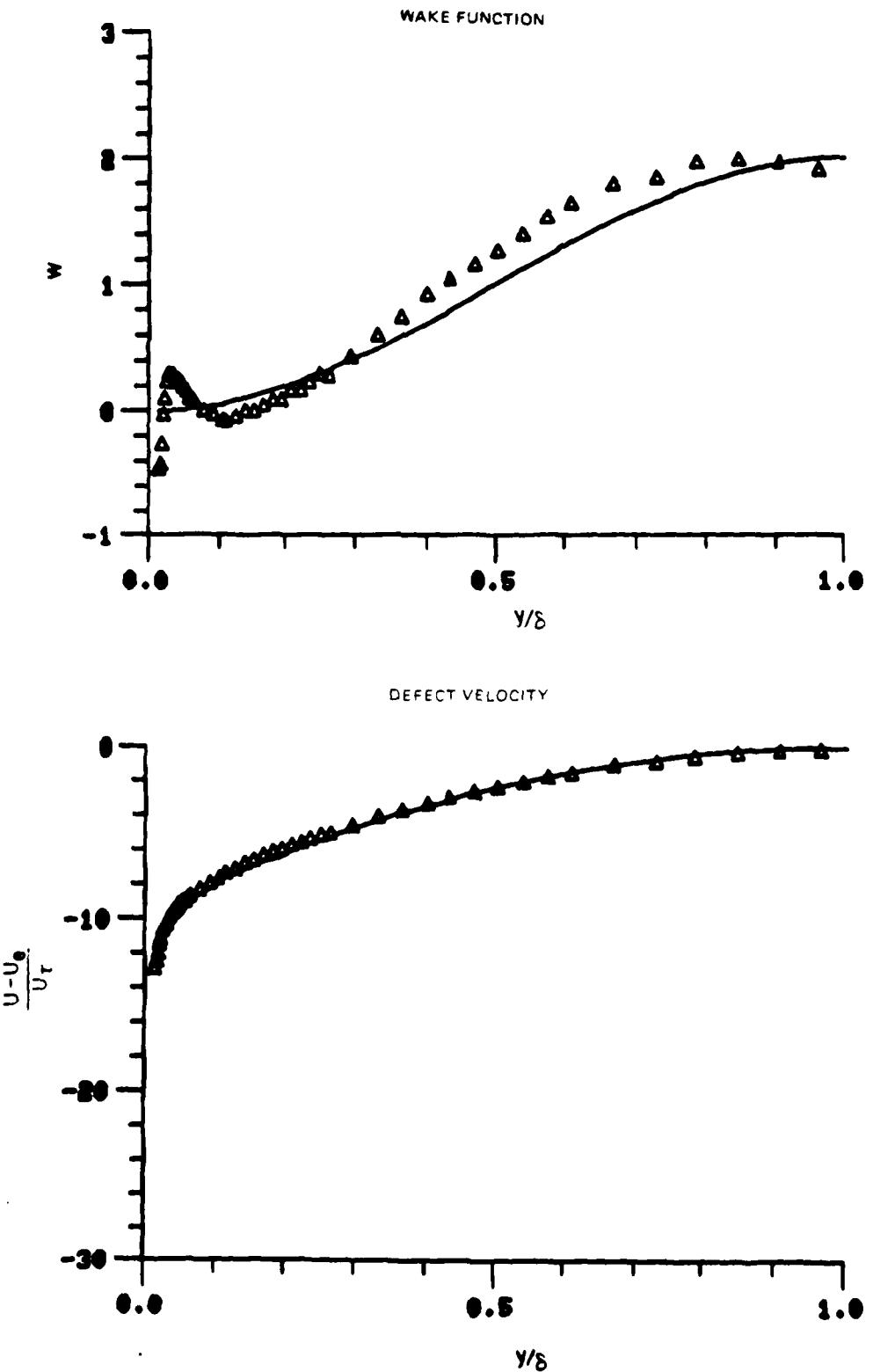


Figure 36. Boundary Layer Velocity Profiles
Run No. 7 Point No. 9

78-12-100-2

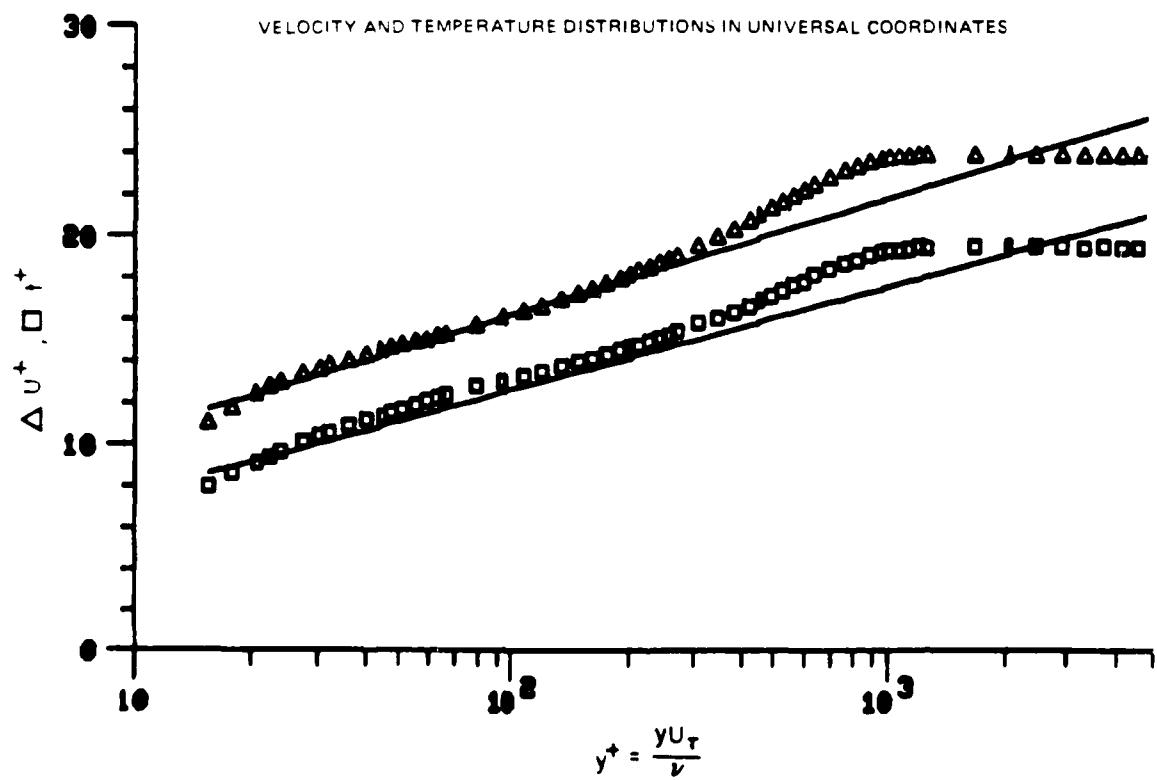
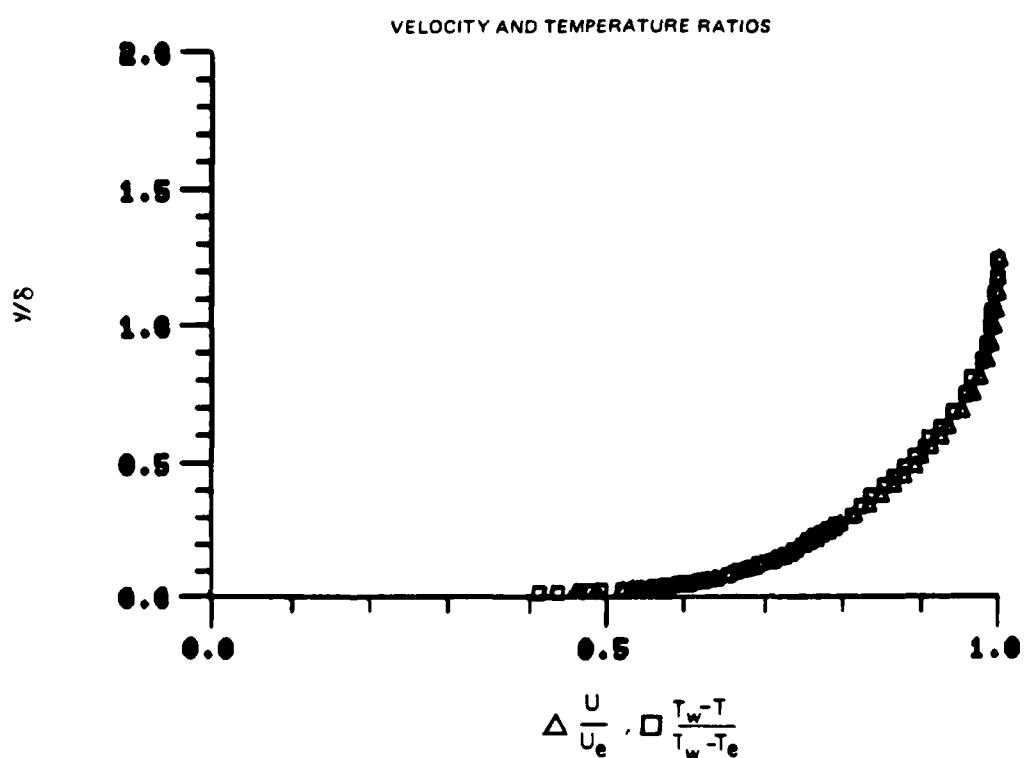


Figure 37. Boundary Layer Velocity and Temperature Profiles
Run No.7 Point No.10

78-12-100-1

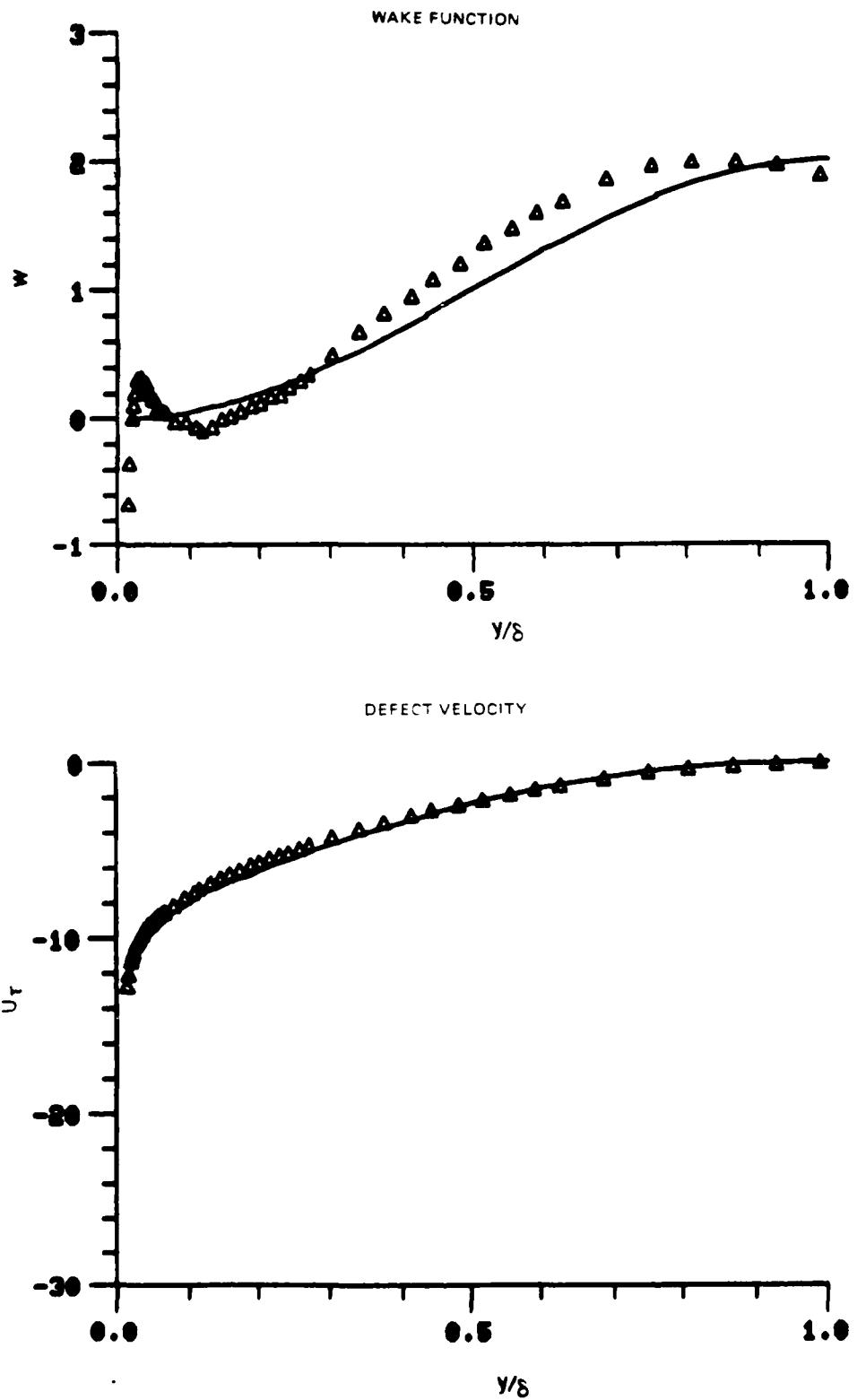
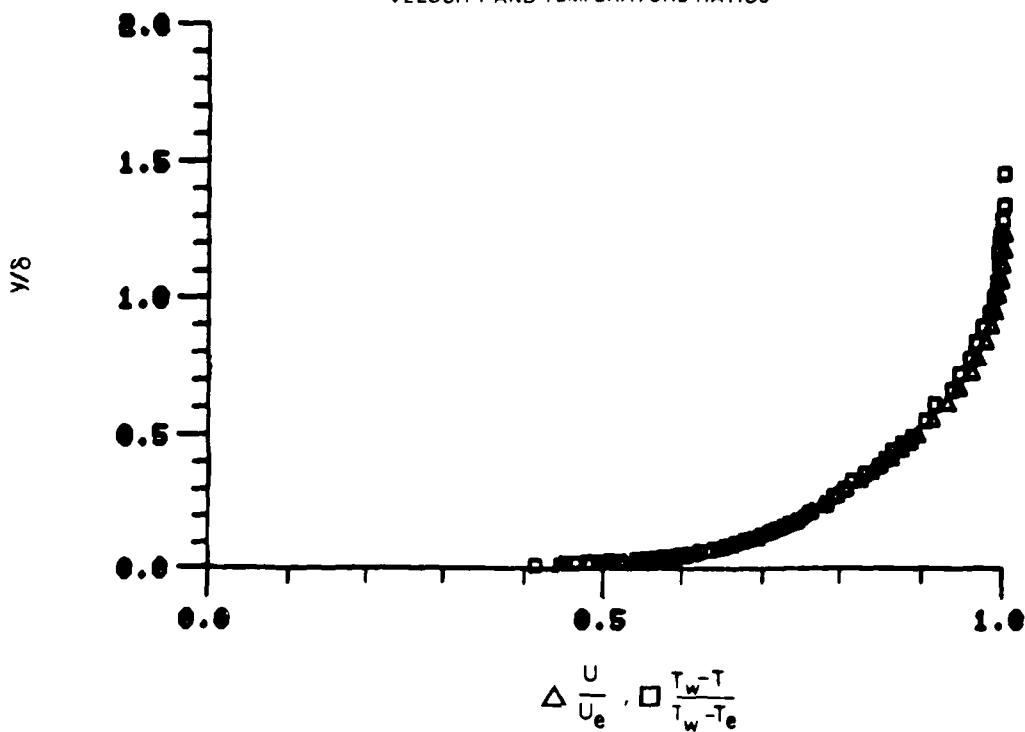


Figure 37. Boundary Layer Velocity Profiles
Run No.7 Point No.10

78-12-100-2

VELOCITY AND TEMPERATURE RATIOS



VELOCITY AND TEMPERATURE DISTRIBUTIONS IN UNIVERSAL COORDINATES

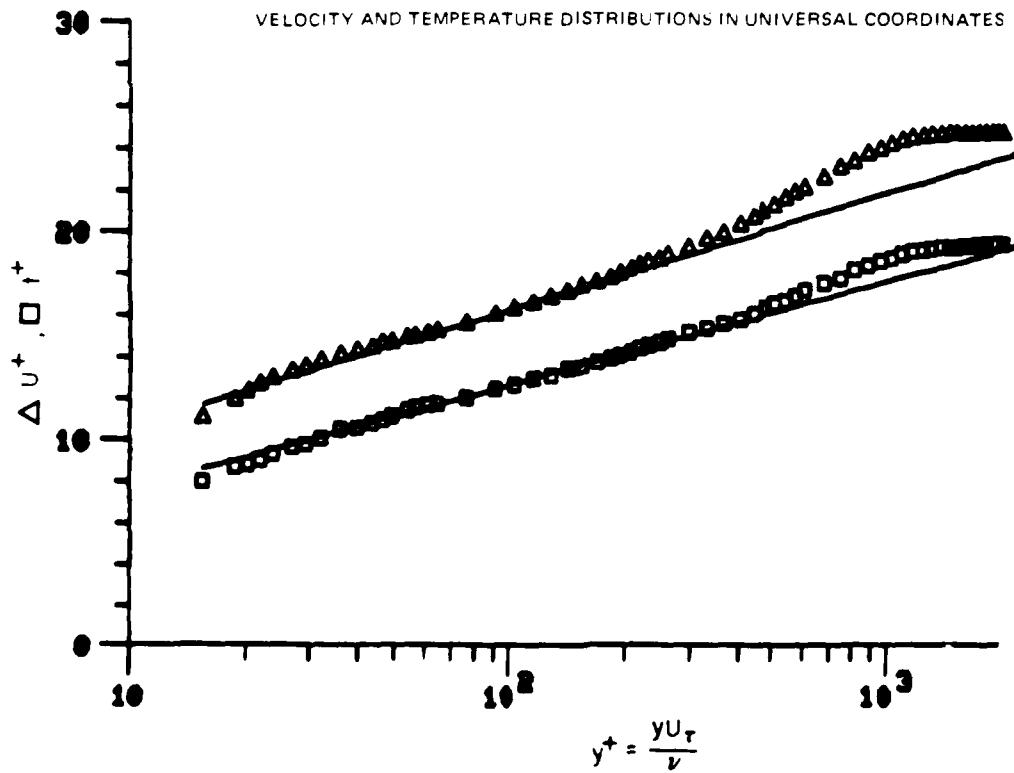


Figure 38. Boundary Layer Velocity and Temperature Profiles
Run No.7 Point No.11

78-12-100-1

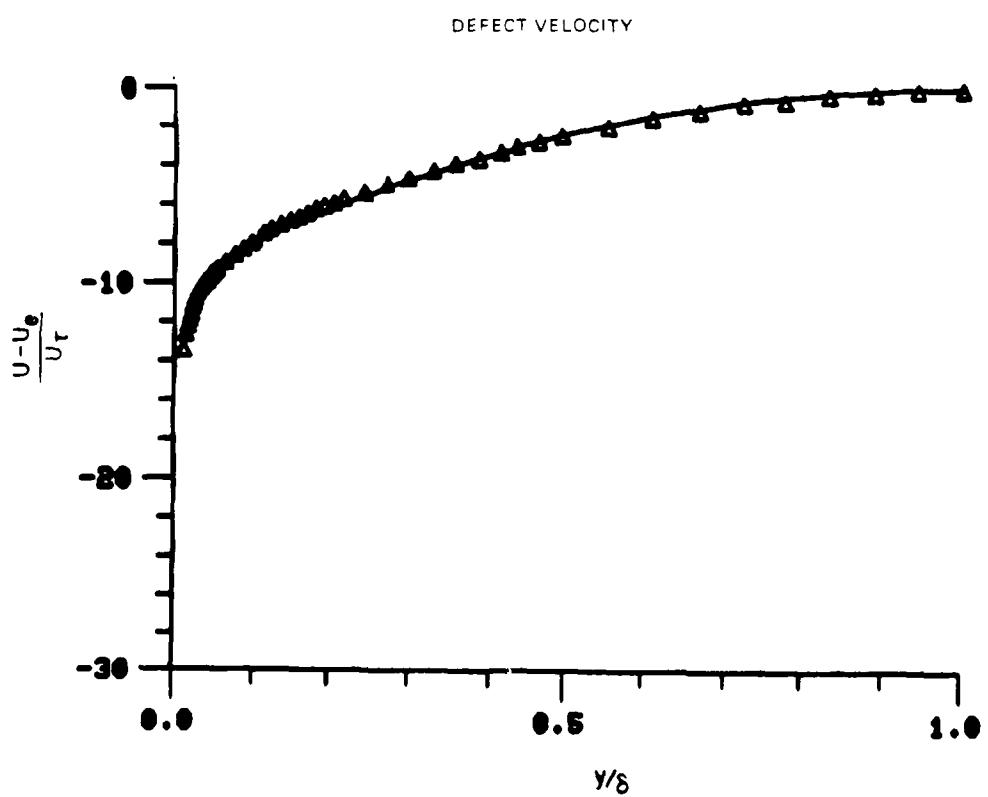
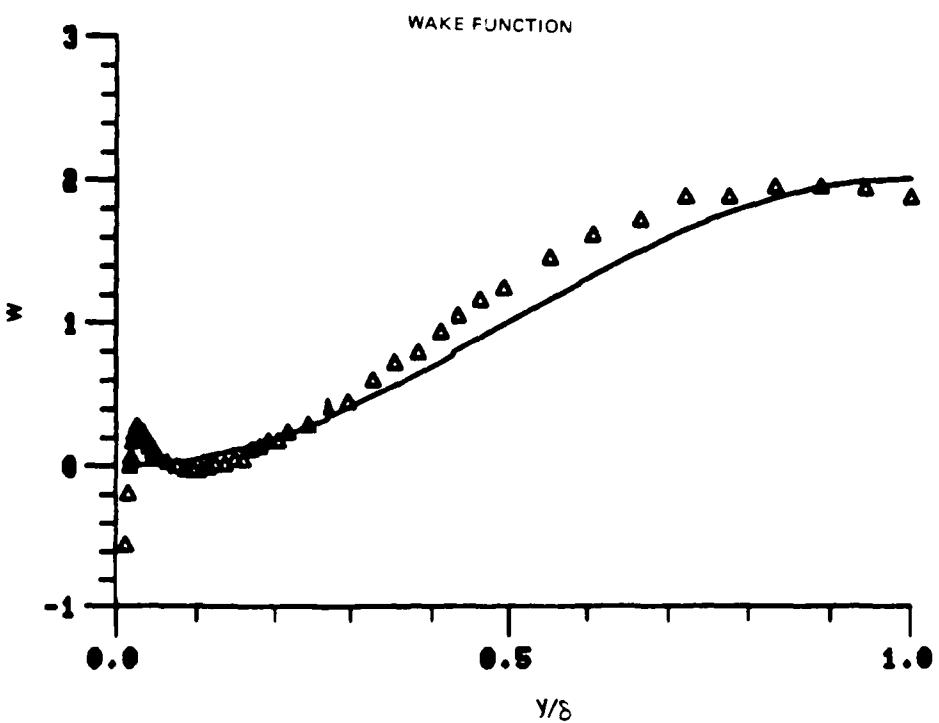


Figure 38. Boundary Layer Velocity Profiles
Run No. 7 Point No. 11

78-12-100-2

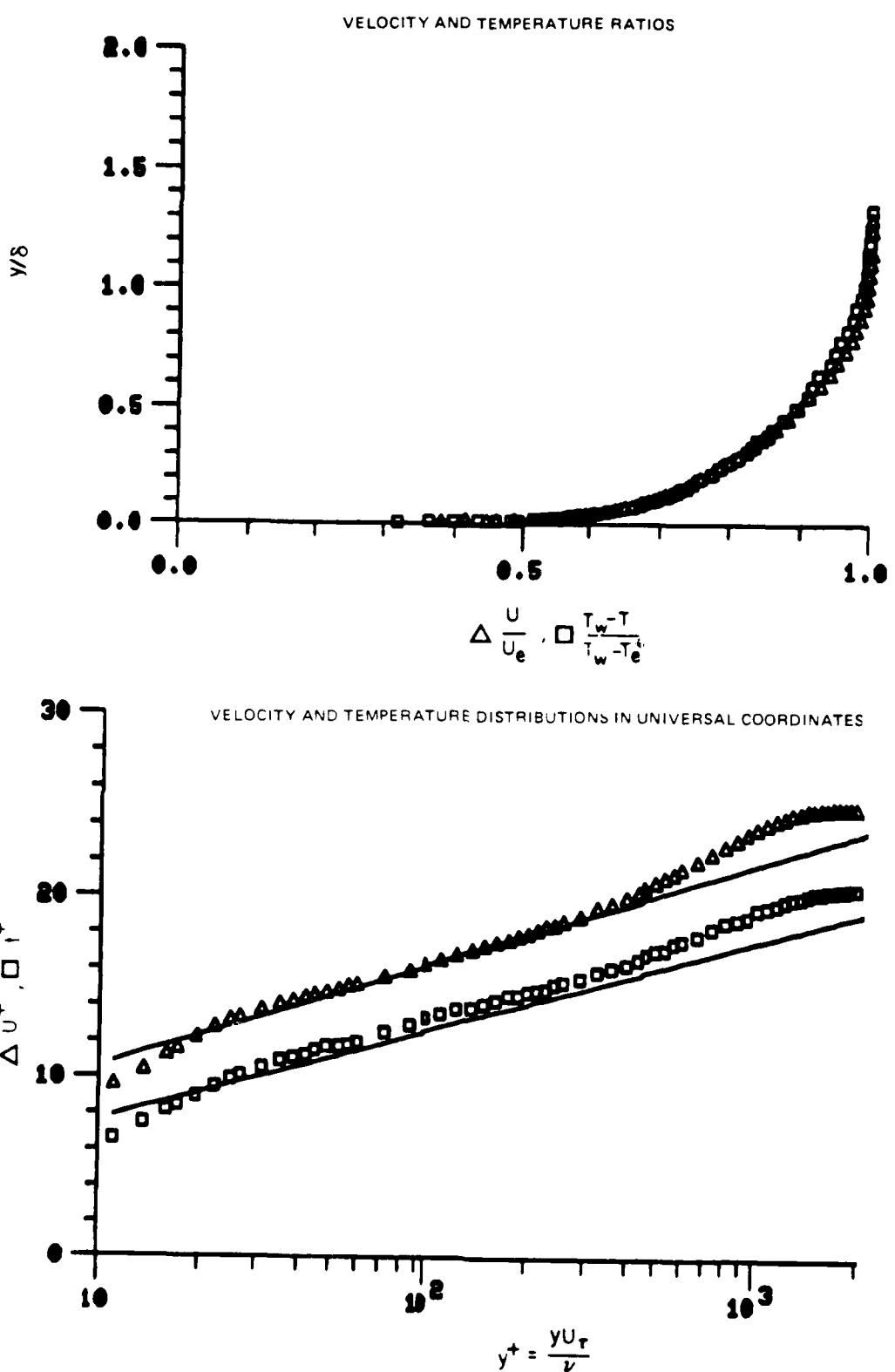


Figure 39. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No.1?

78-12-100-1

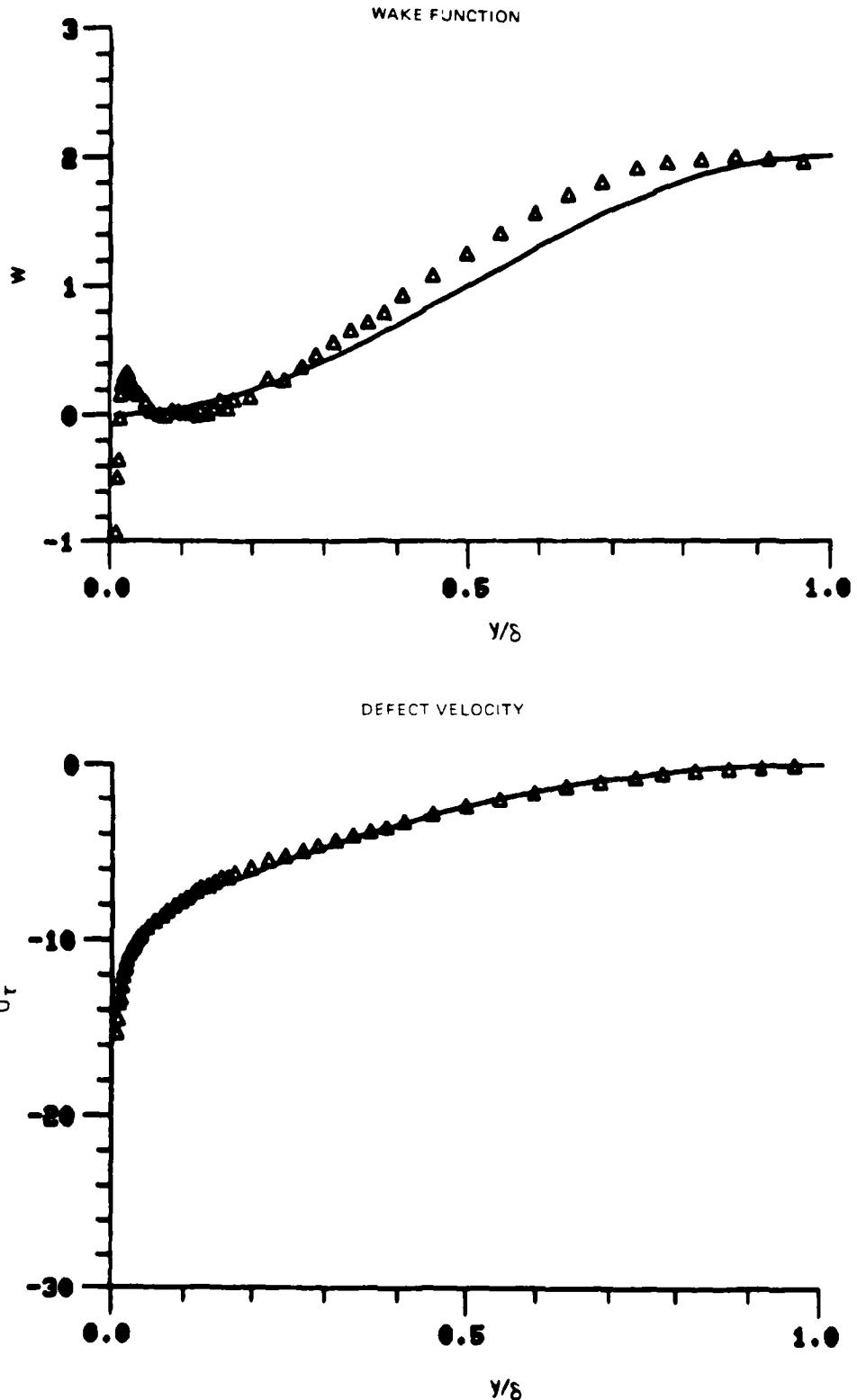


Figure 39. Boundary Layer Velocity Profiles
Run No. 7 Point No. 12

7B-12-100-2

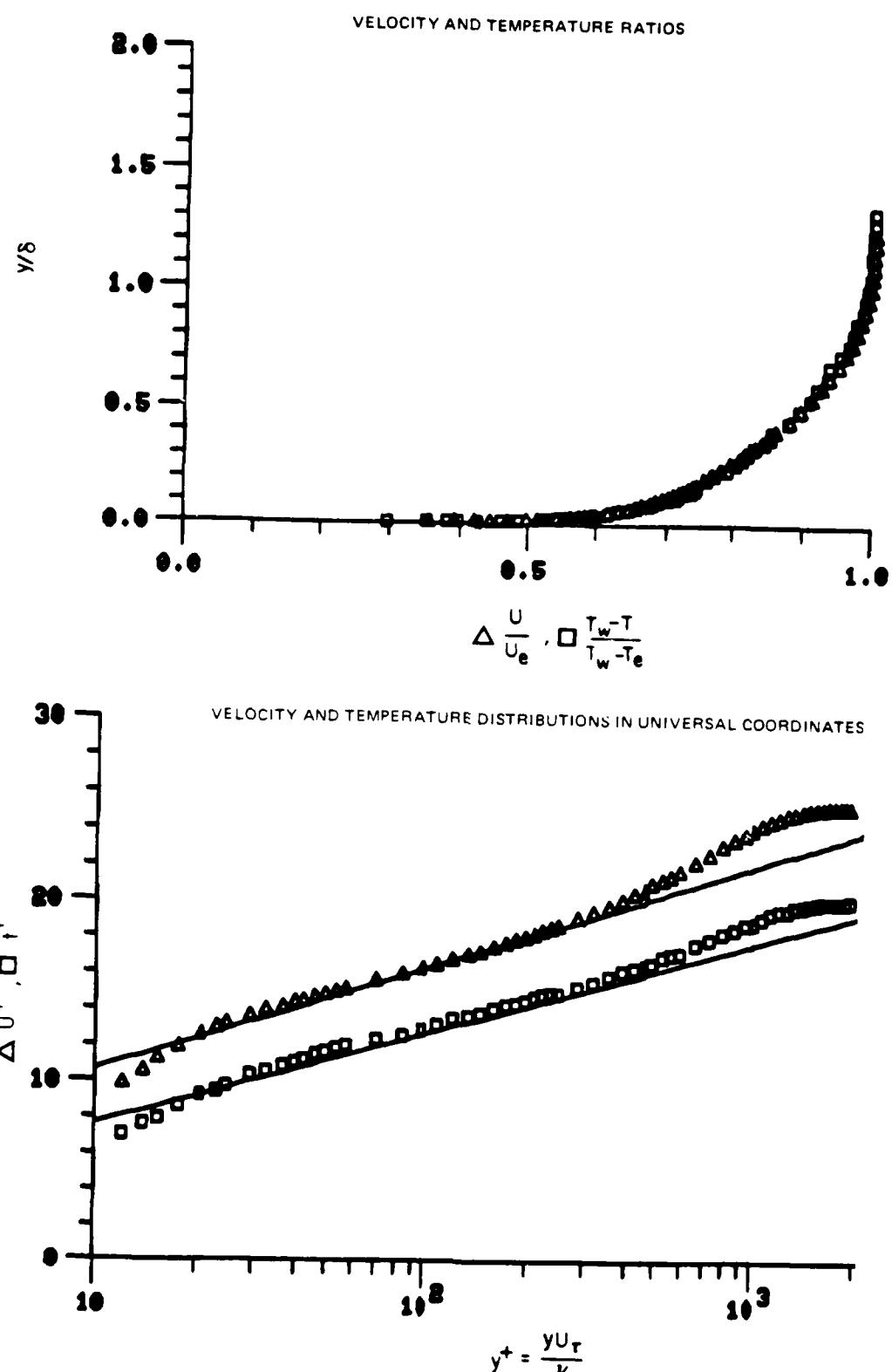


Figure 40. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 13

78-12-100-1

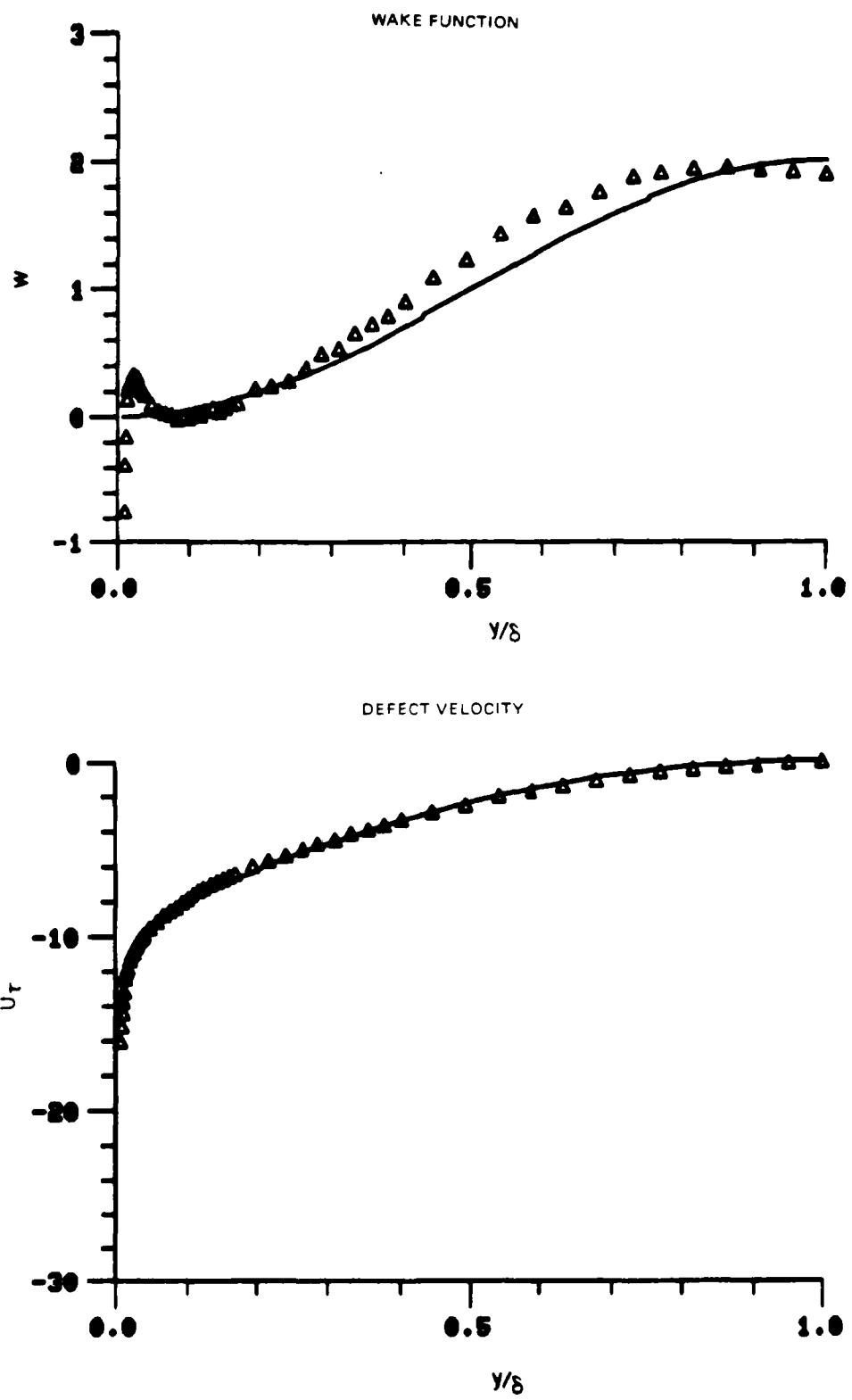


Figure 40. Boundary Layer Velocity Profiles
Run No. 7 Point No. 13

78-12-100-2

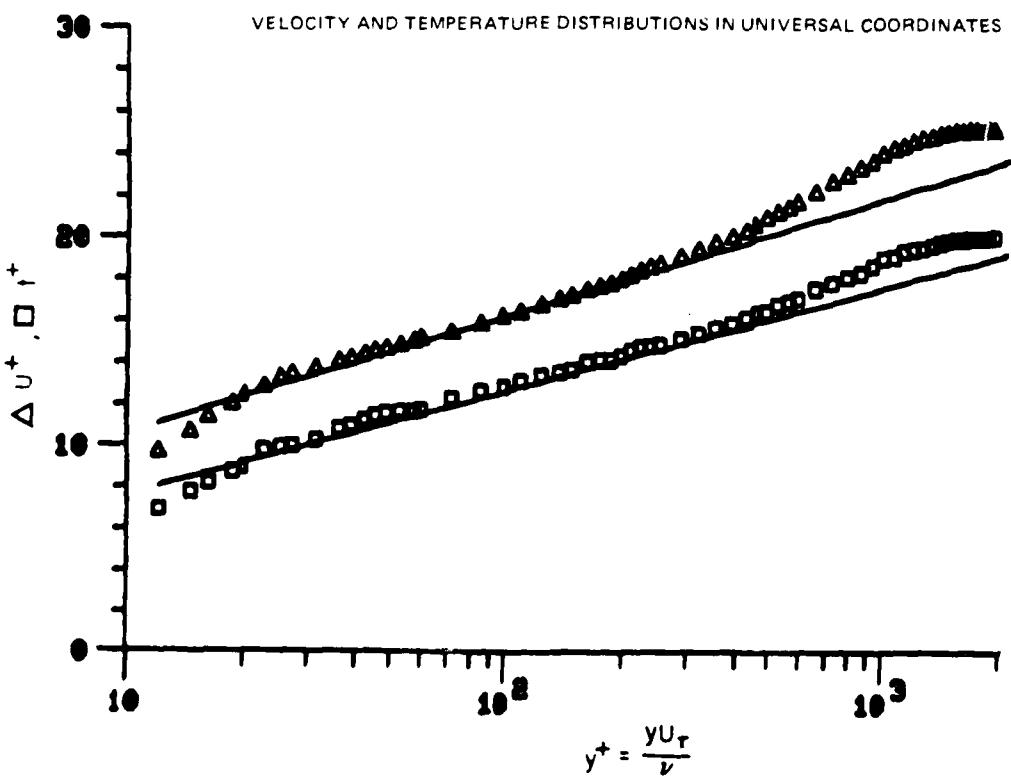
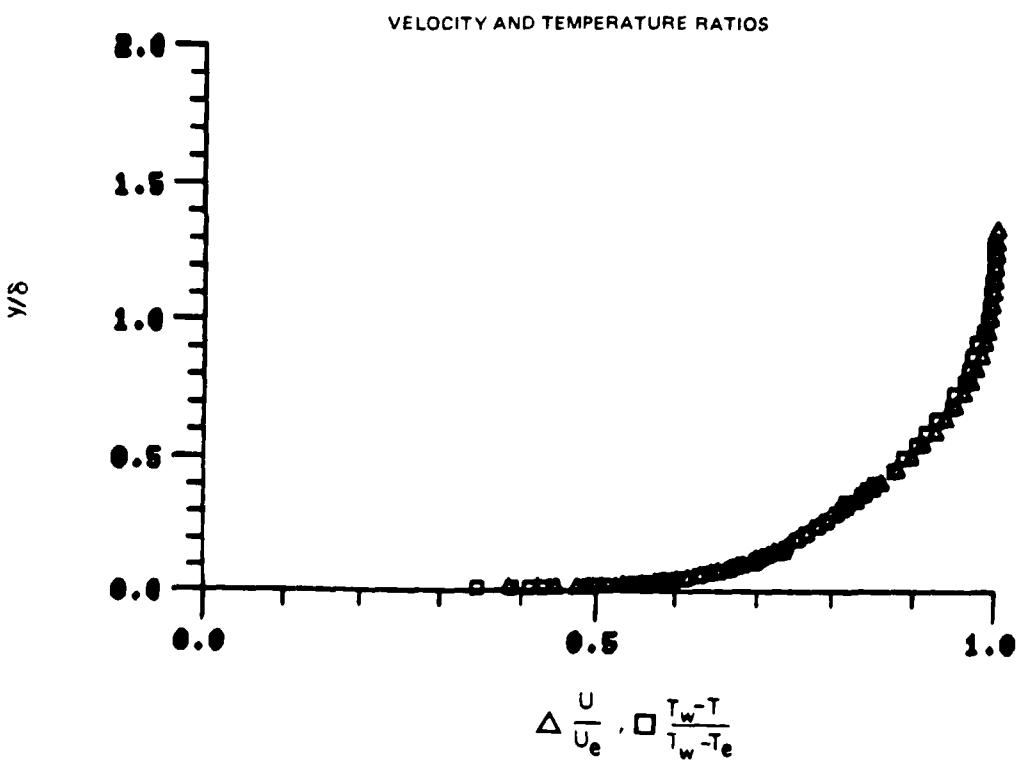


Figure 41. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 14

78-12-100-1

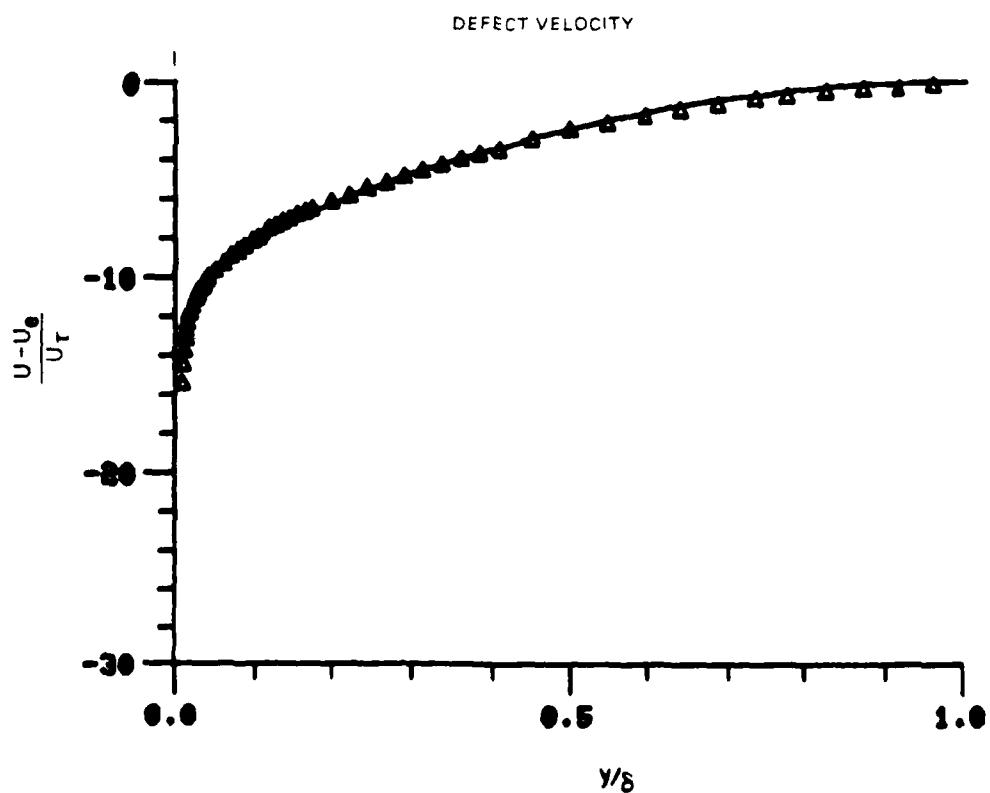
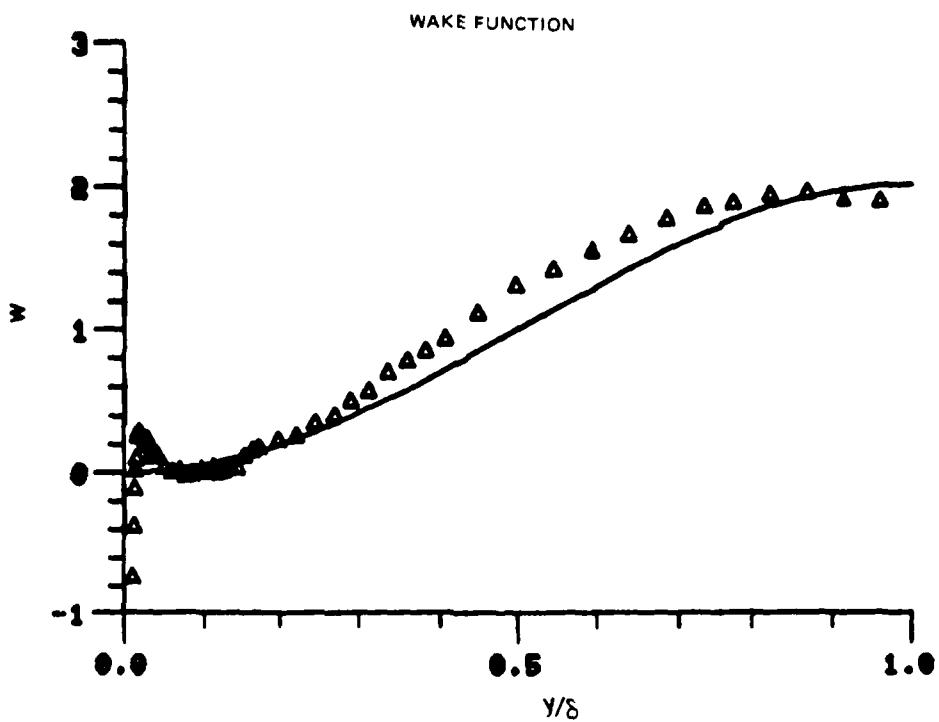


Figure 41. Boundary Layer Velocity Profiles
Run No. 7 Point No. 14

78-17-100-2

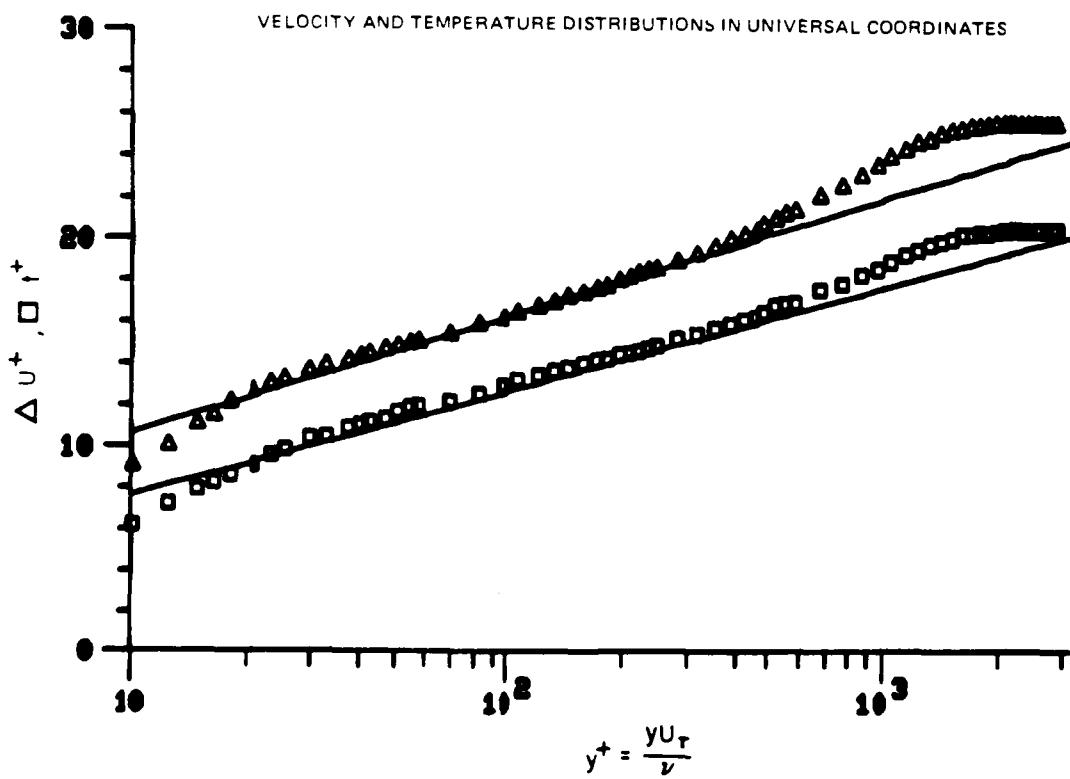
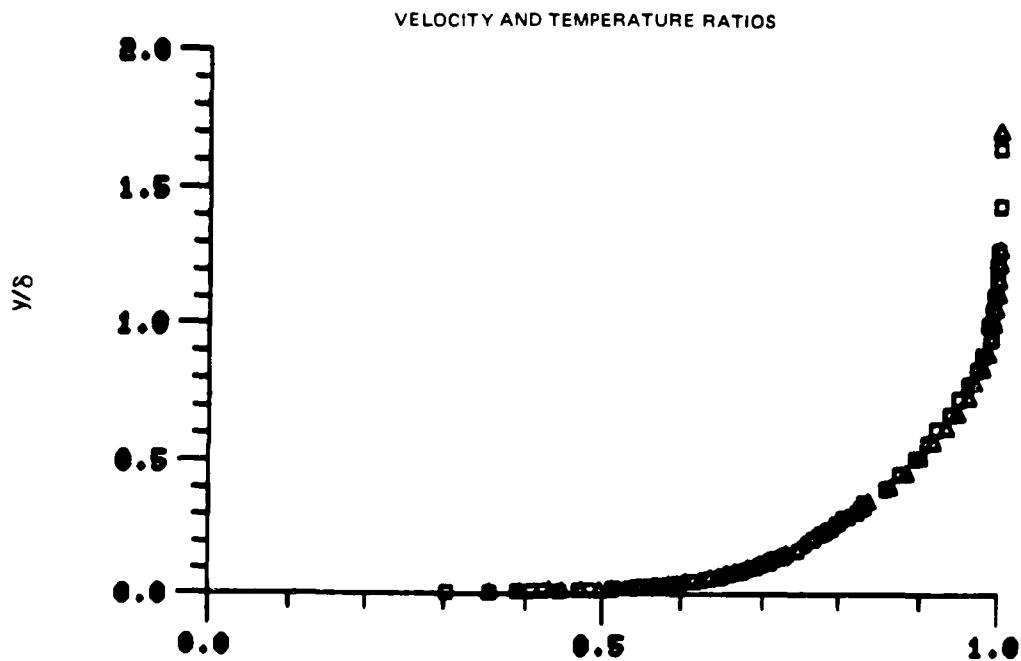


Figure 42. Boundary Layer Velocity and Temperature Profiles
Run No.7 Point No.15

78-12-100-1

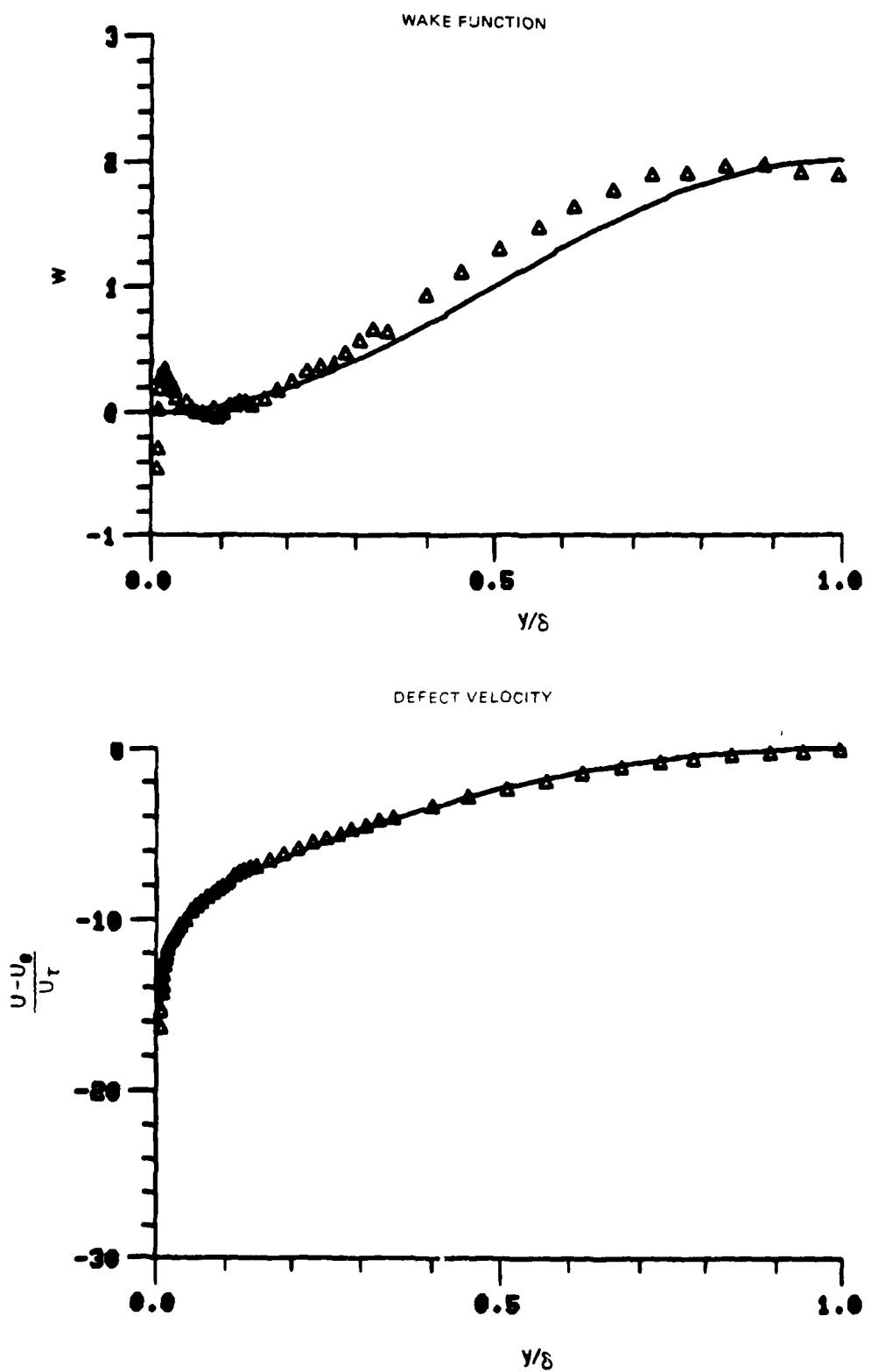
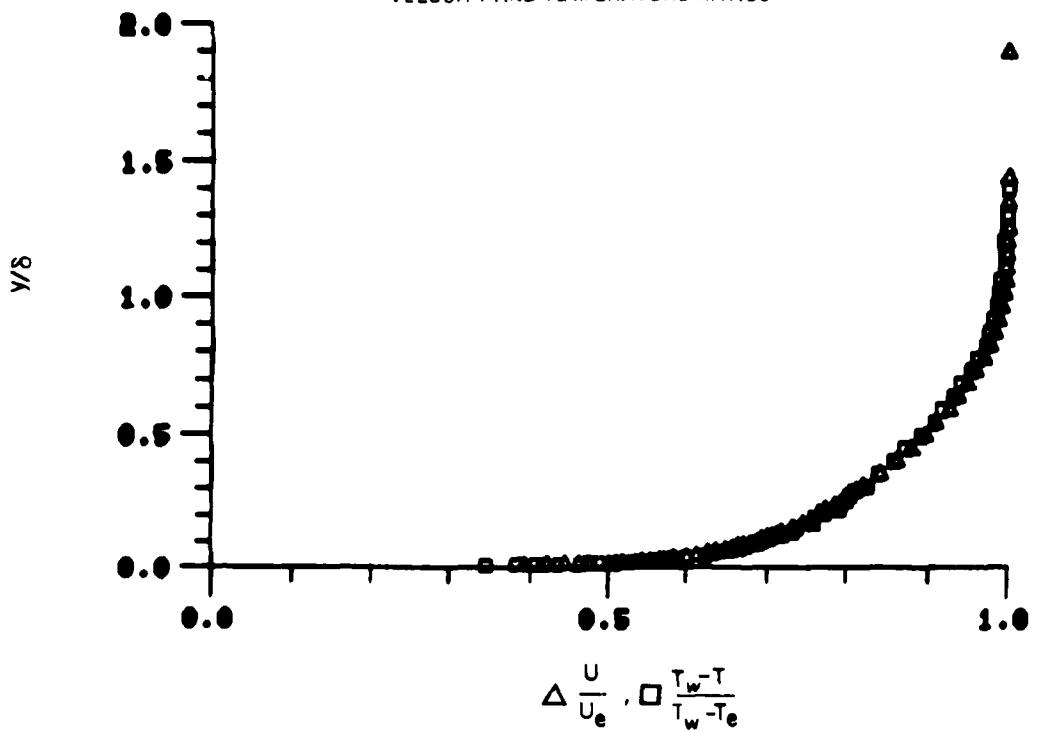


Figure 42. Boundary Layer Velocity Profiles
Run No.7 Point No.15

78-12-100-2

VELOCITY AND TEMPERATURE RATIOS



$$\Delta \frac{U}{U_e}, \square \frac{T_w - T}{T_w - T_e}$$

VELOCITY AND TEMPERATURE DISTRIBUTIONS IN UNIVERSAL COORDINATES

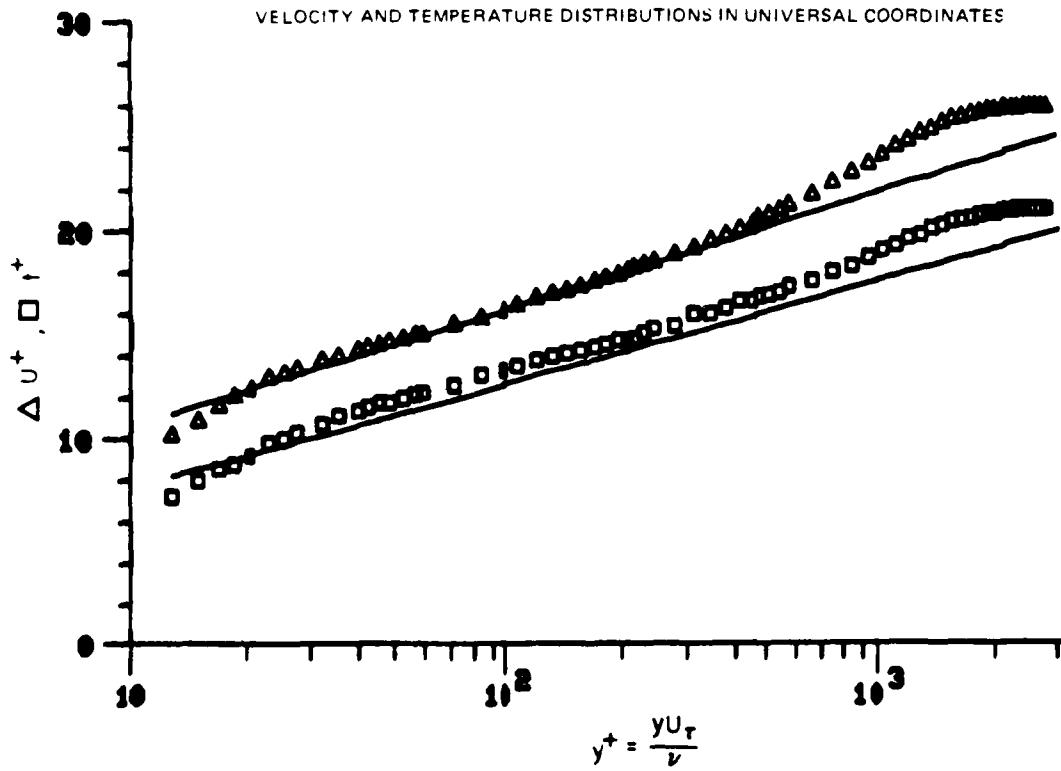


Figure 43. Boundary Layer Velocity and Temperature Profiles
Run No.7 Point No.17

78-12-100-1

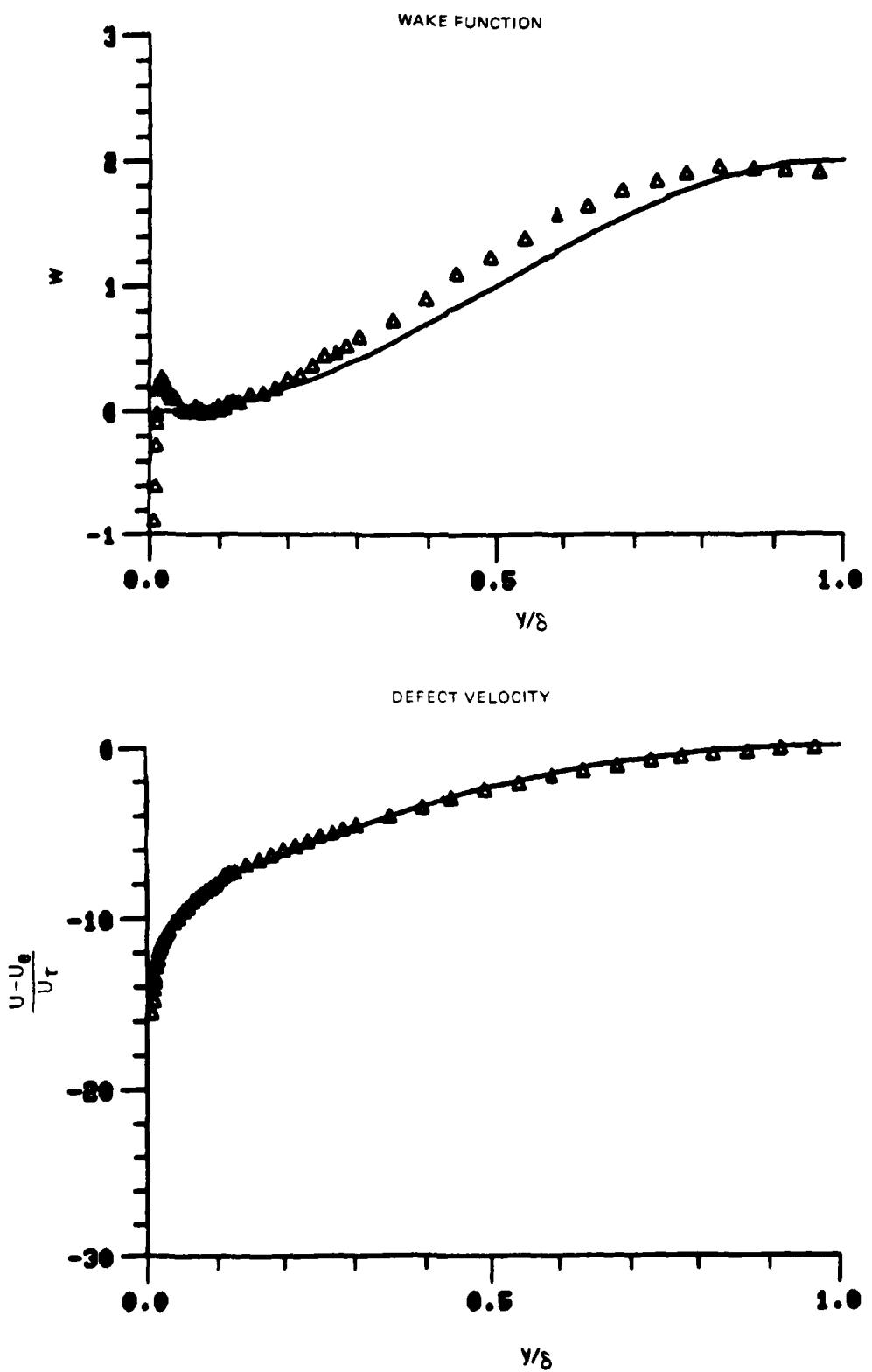


Figure 43. Boundary Layer Velocity Profiles
Run No. 7 Point No. 17

78-12-100-2

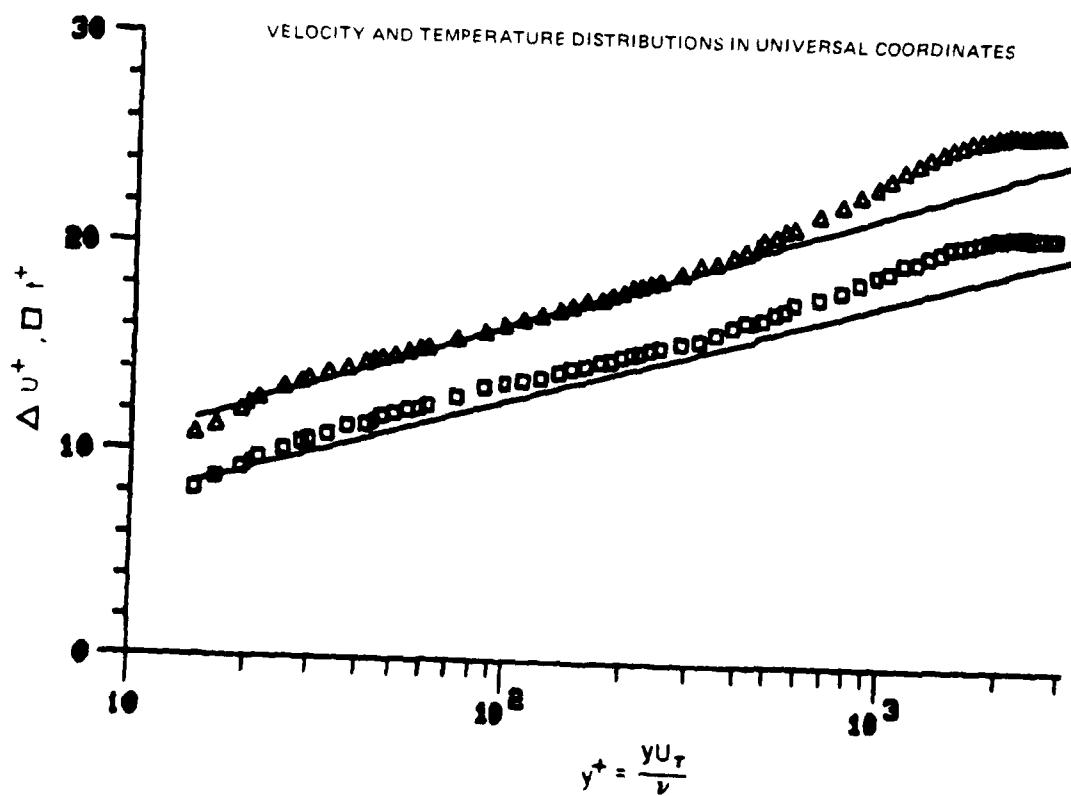
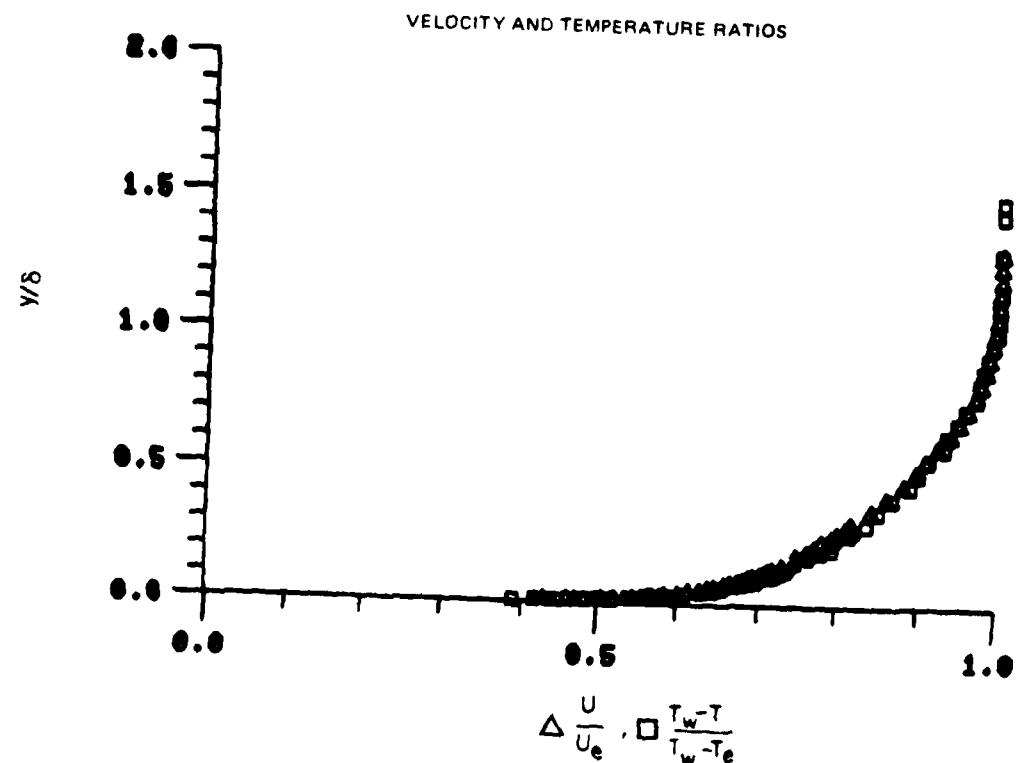


Figure 44. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 18

78-12-100-1

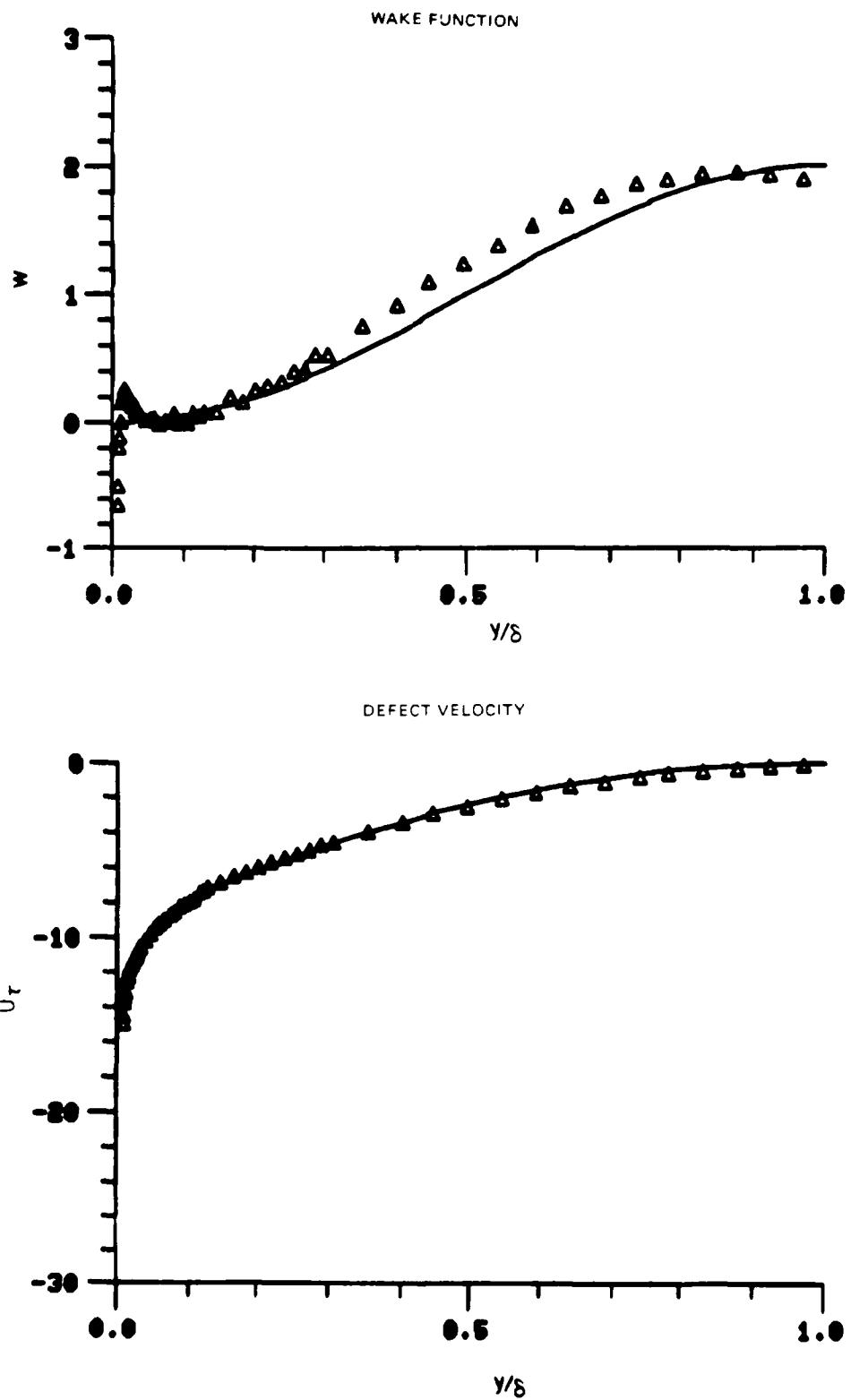


Figure 44. Boundary Layer Velocity Profiles
Run No. 7 Point No. 18

78-12-100-2

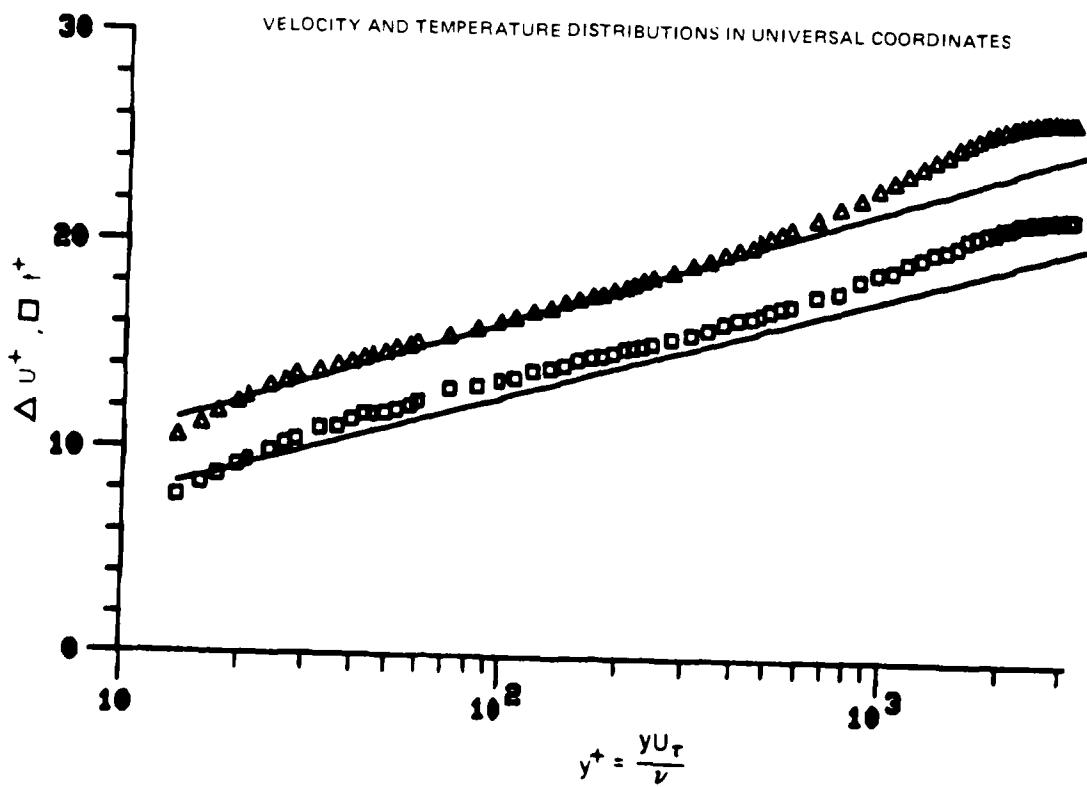
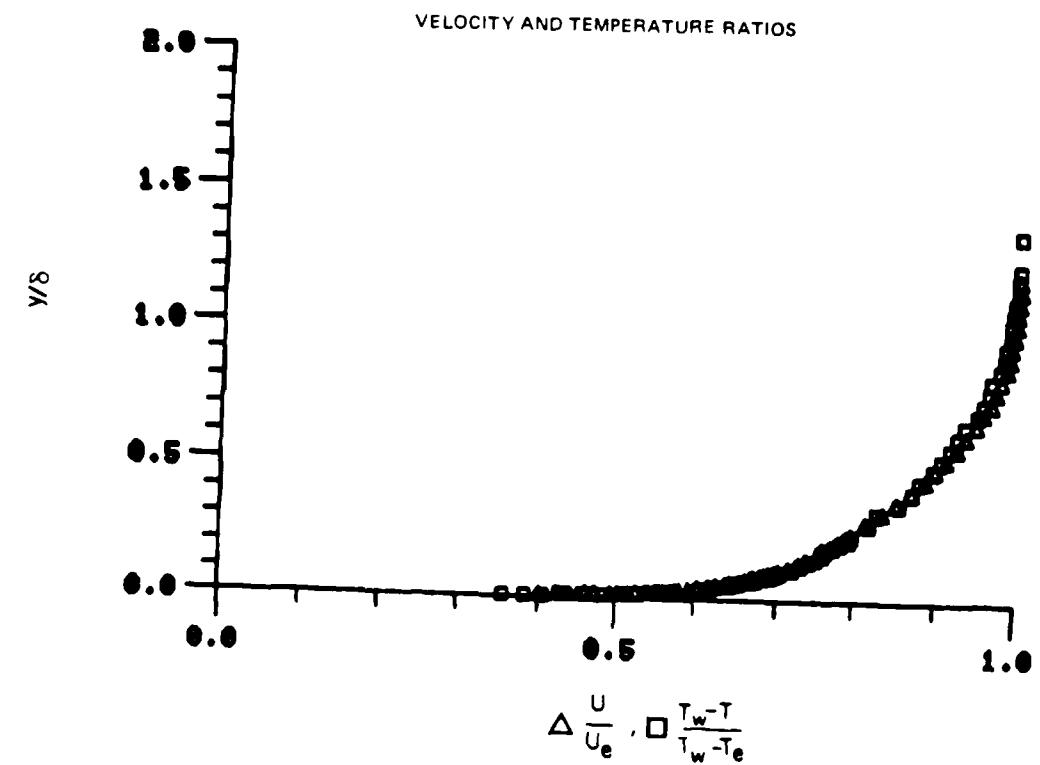


Figure 45. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 20

78-12-100-1

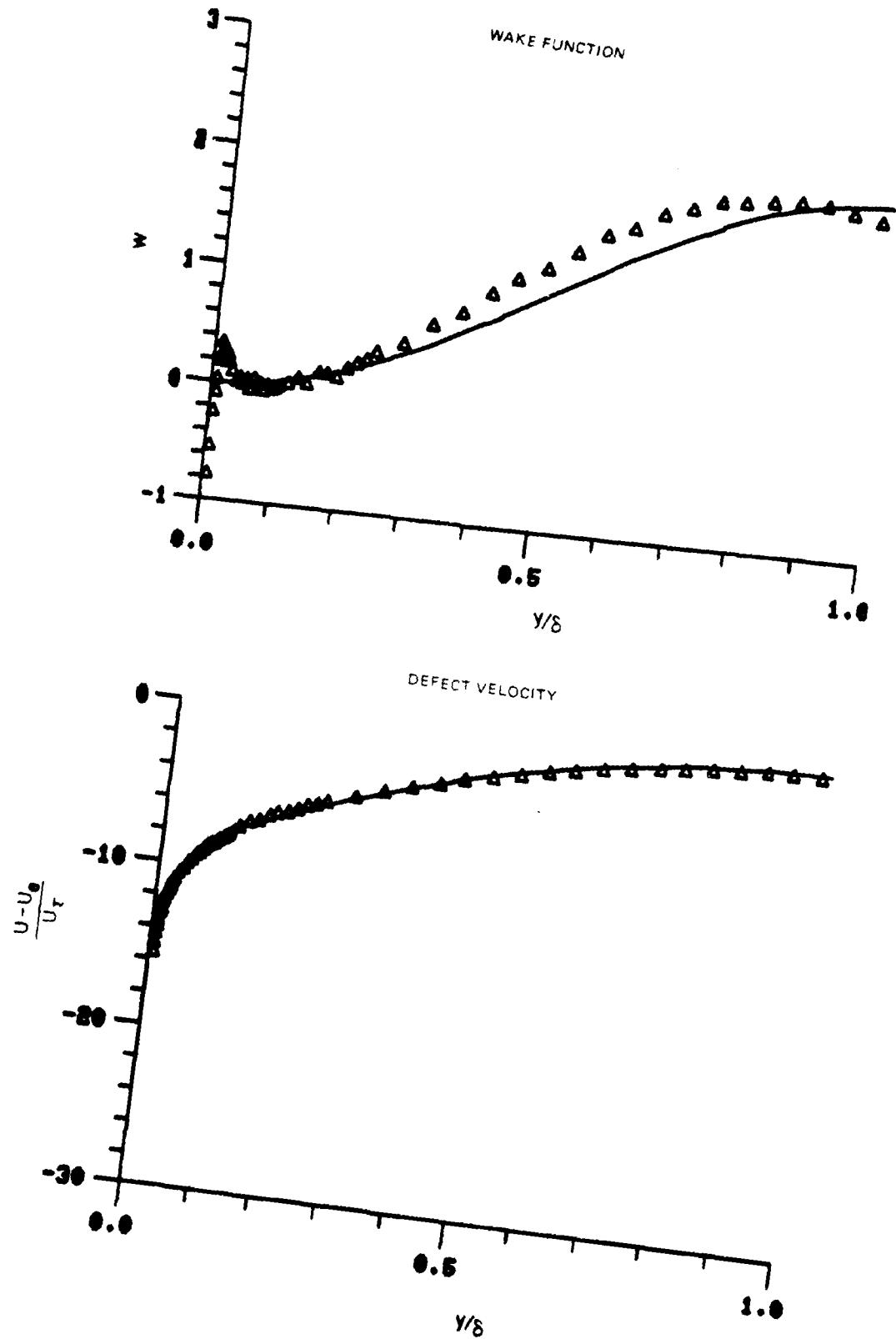


Figure 45. Boundary Layer Velocity Profiles
Run No. 7 Point No. 20

78-12-100-2

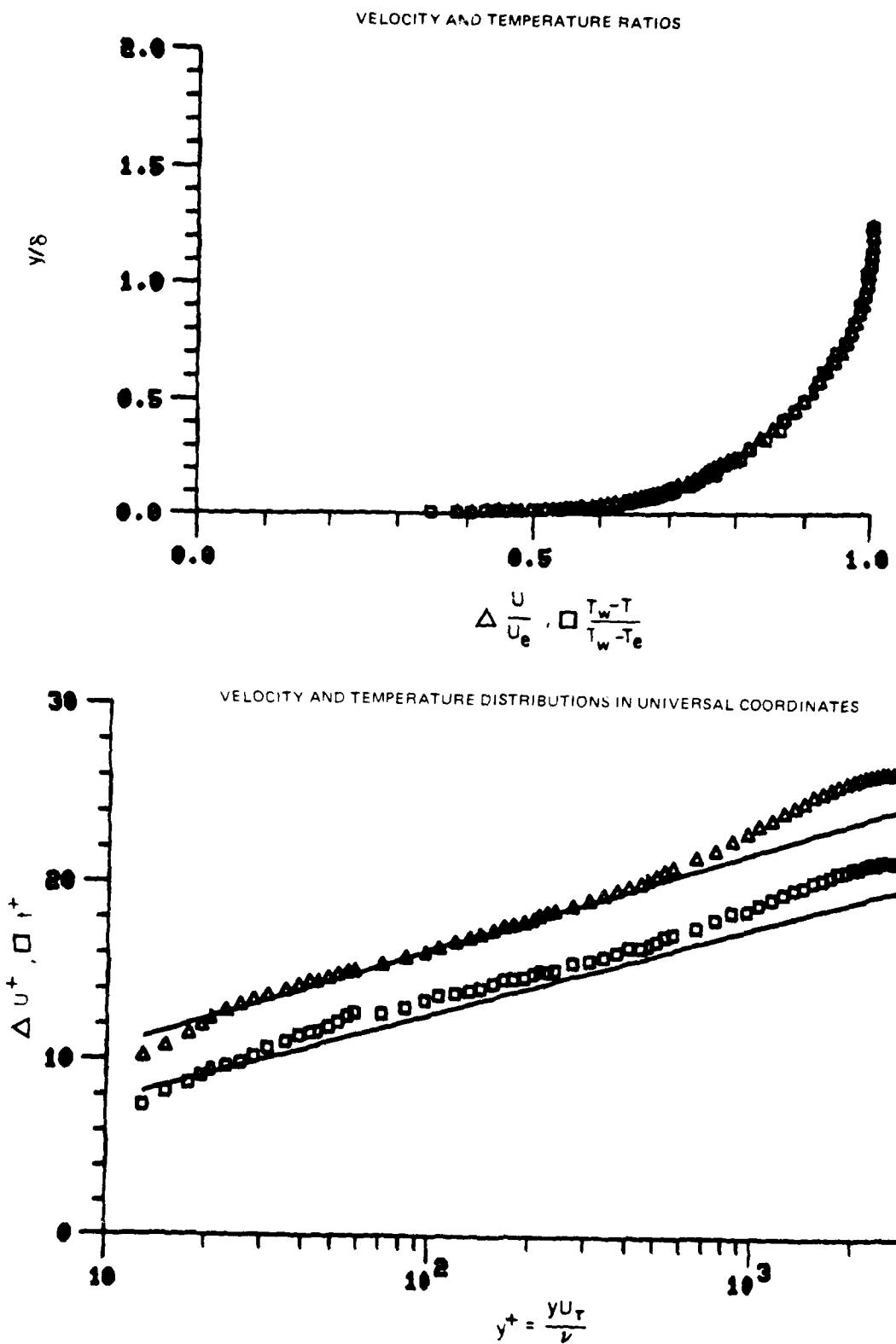


Figure 46. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 22

78-12-100-1

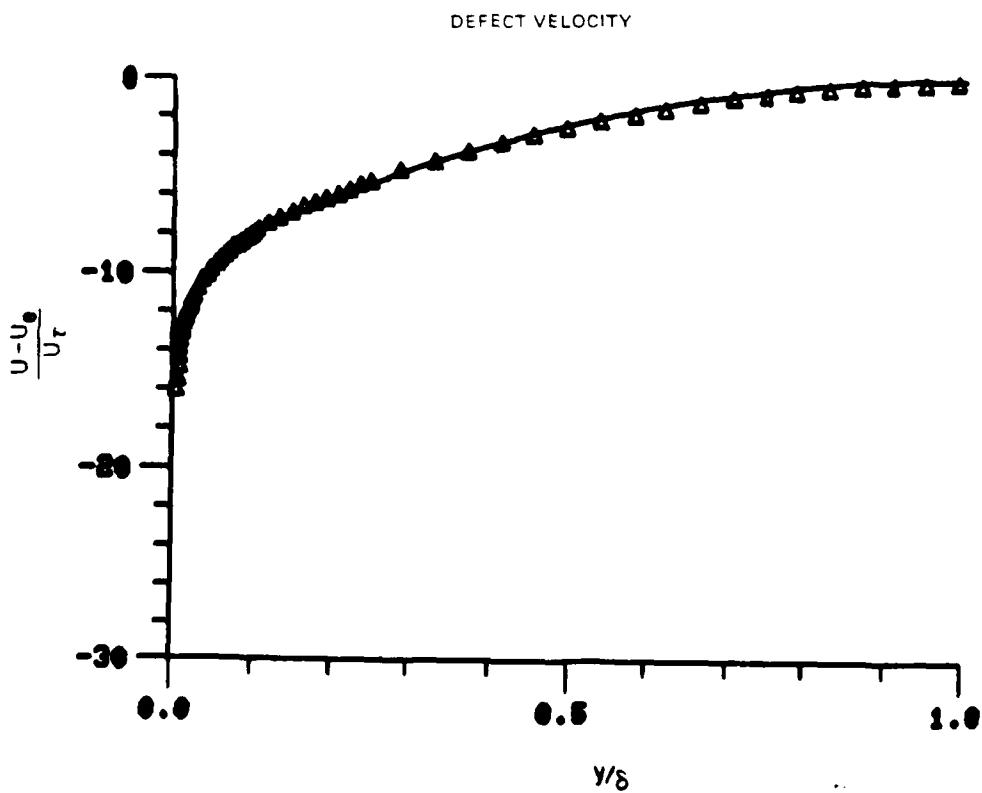
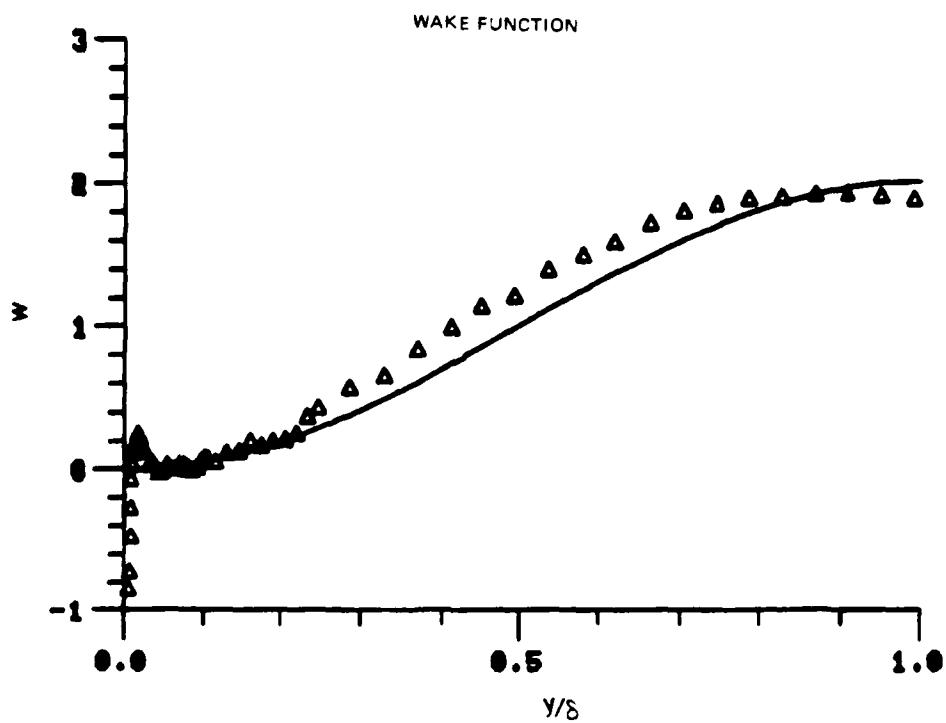
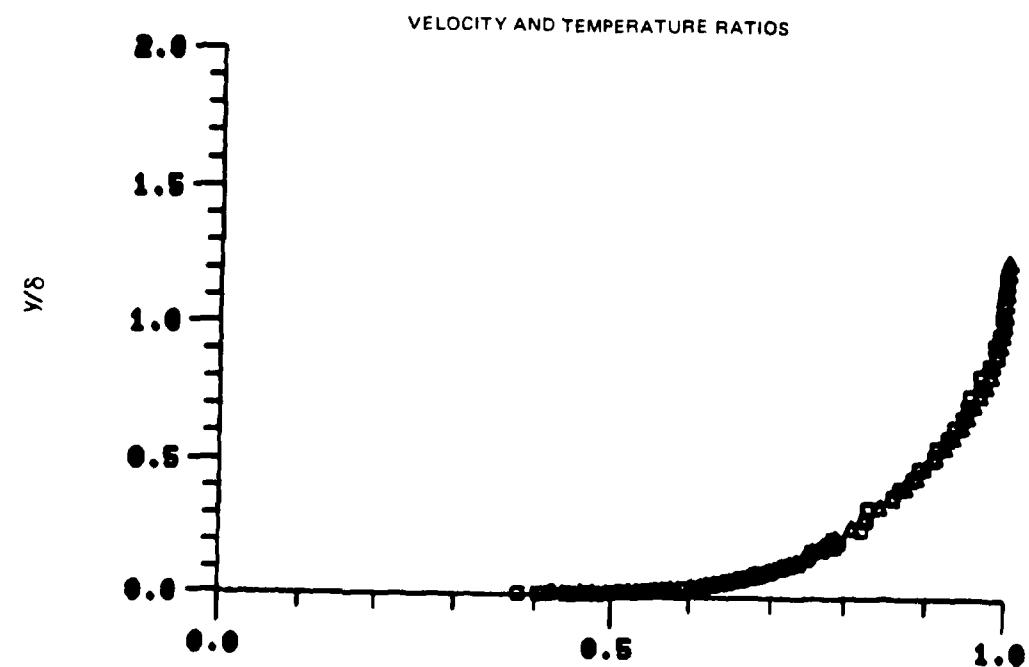


Figure 46. Boundary Layer Velocity Profiles
Run No. 7 Point No. 22

78-12-100-2



$$\Delta \frac{U}{U_e}, \square \frac{T_w - T}{T_w - T_e}$$

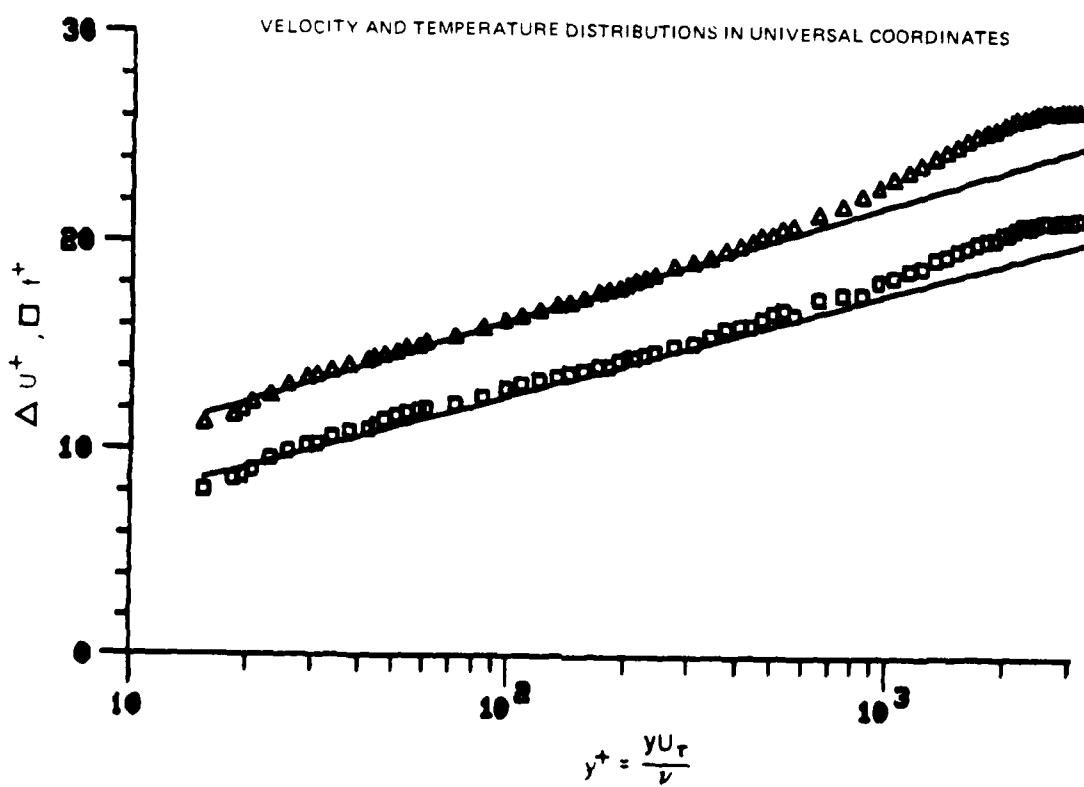


Figure 47. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 23

78-12-100-1

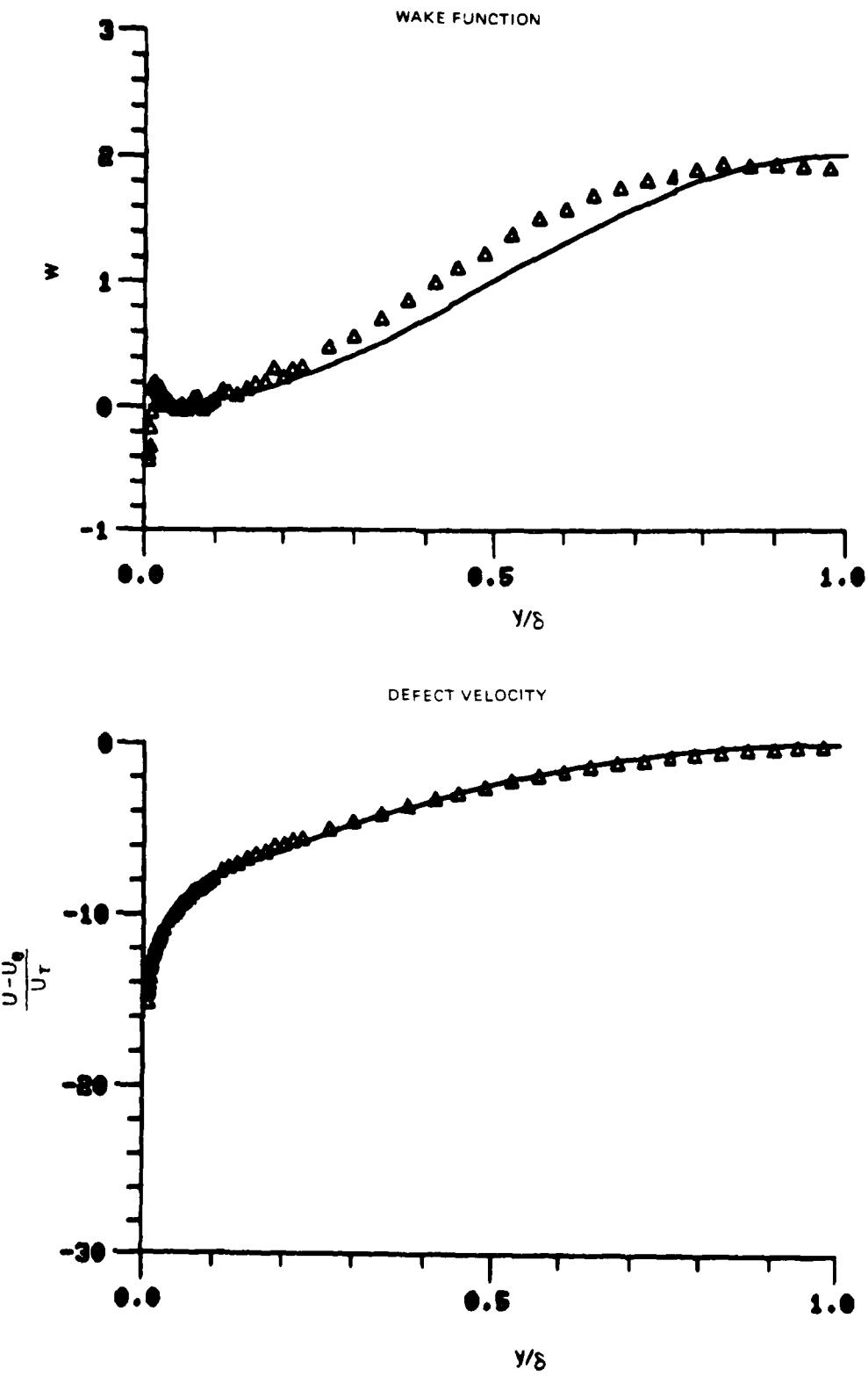


Figure 47. Boundary Layer Velocity Profiles
Run No. 7 Point No. 23

78-12-100-2

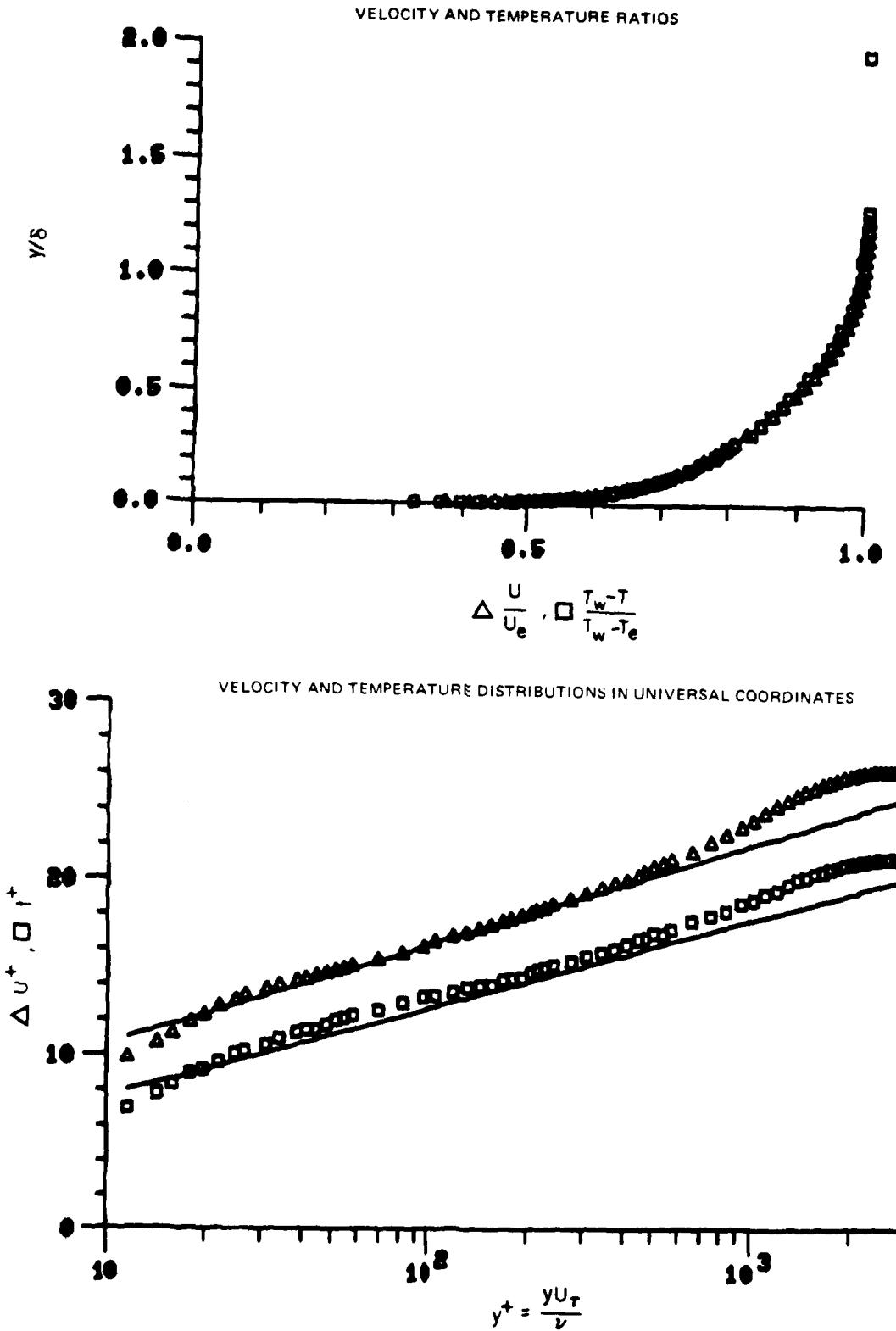


Figure 48. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 24

78-12-100-1

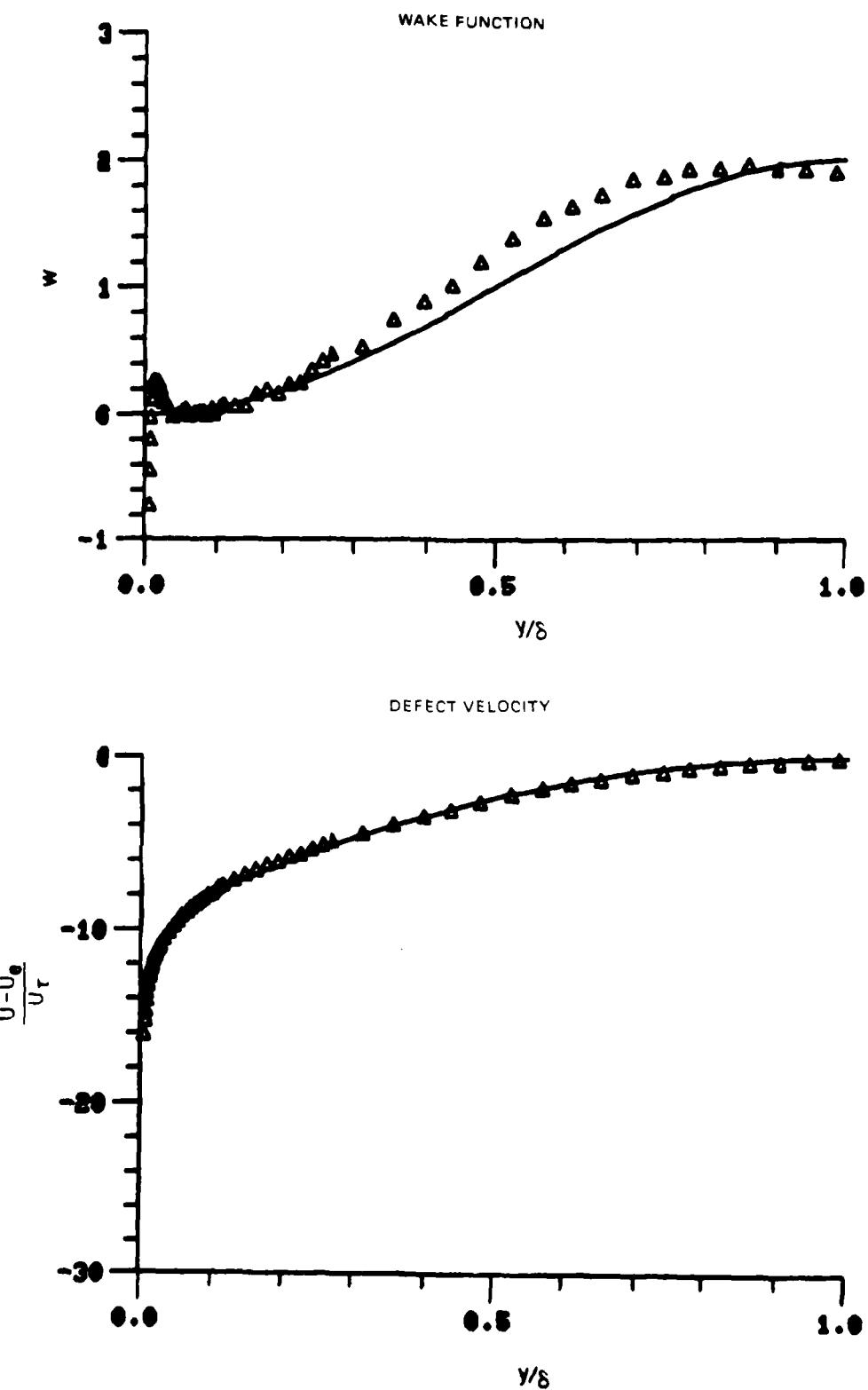


Figure 48. Boundary Layer Velocity Profiles
Run No. 7 Point No. 24

78-12-100-2

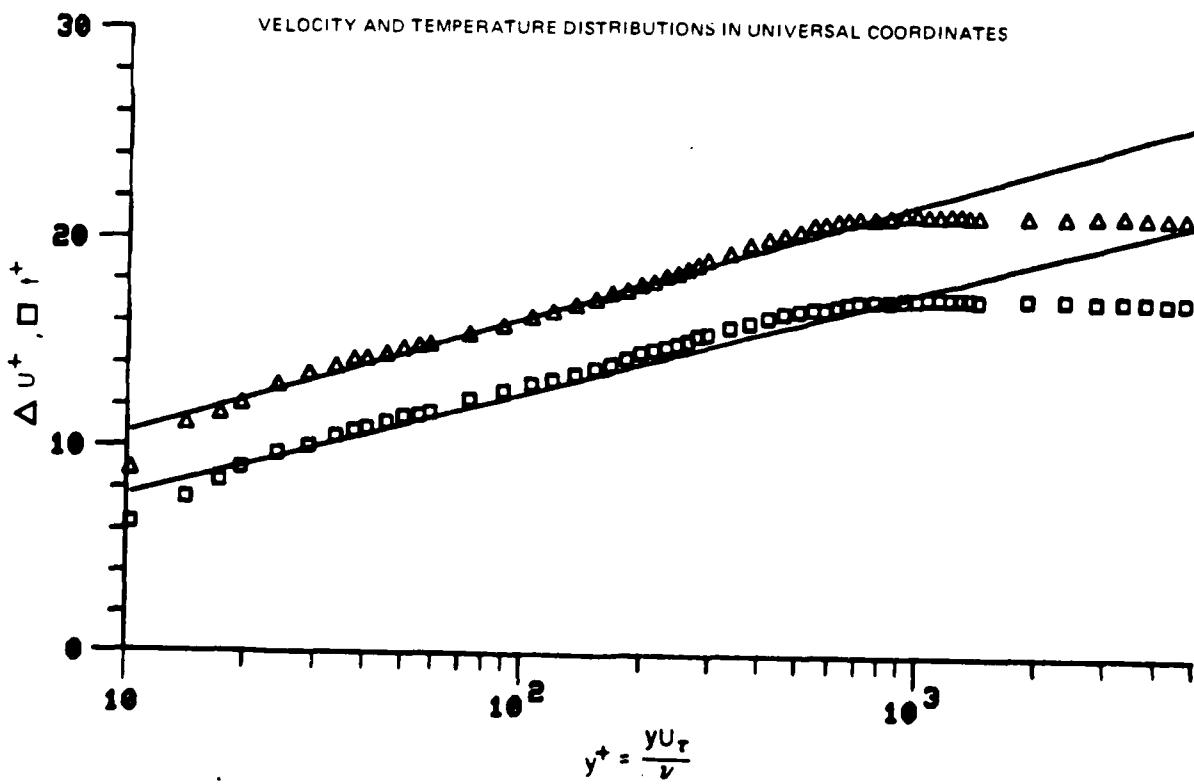
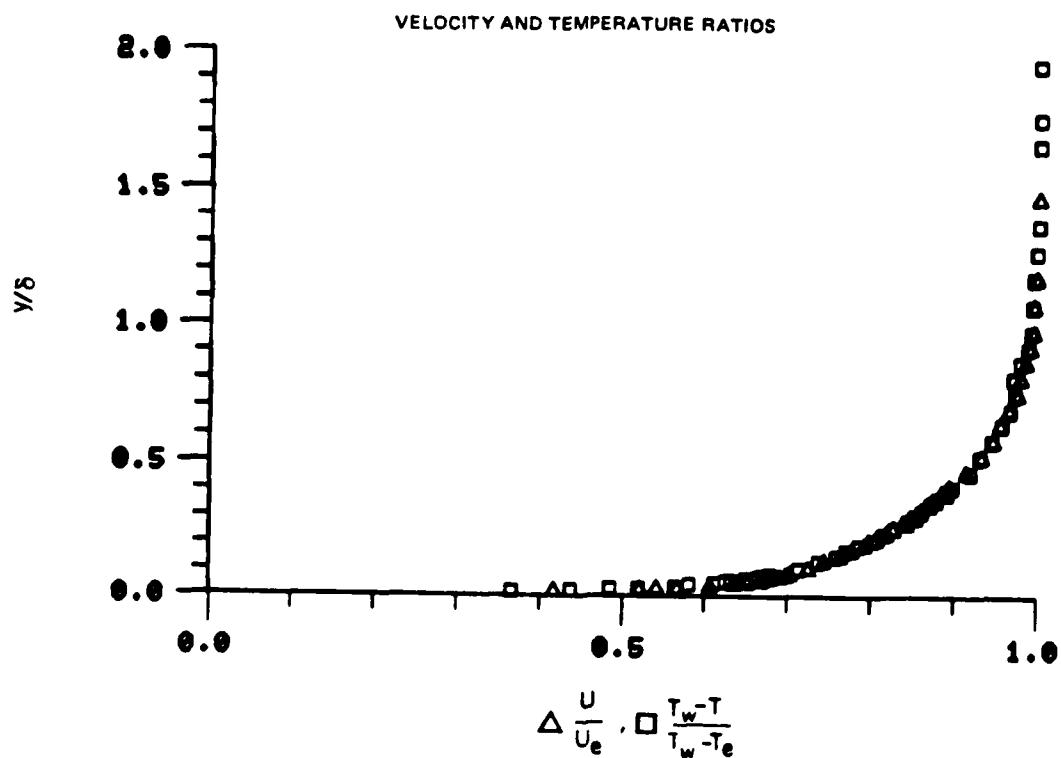


Figure 49. Boundary Layer Velocity and Temperature Profiles

Run No. 10 Point No. 1

78-12-100-1

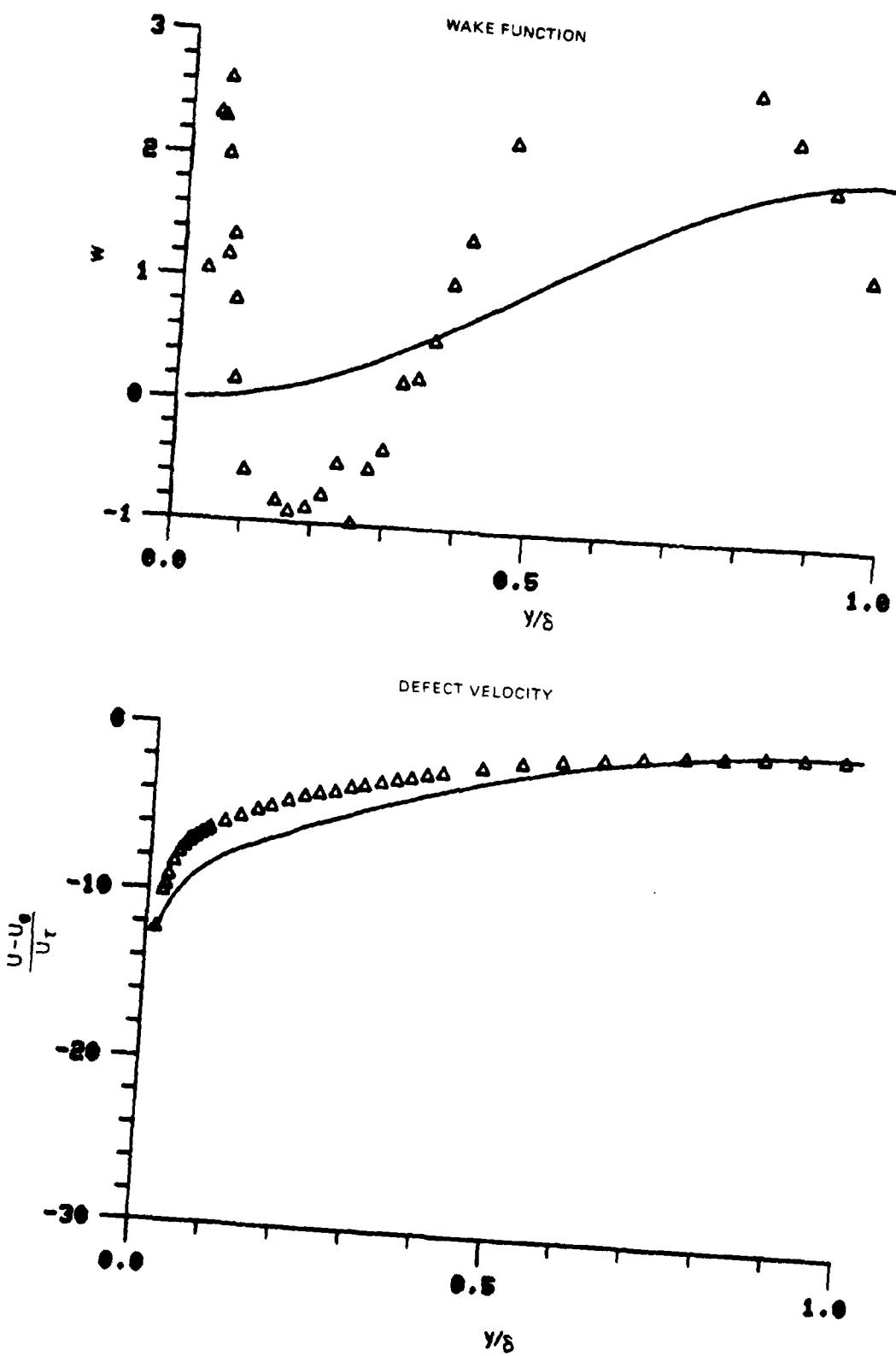


Figure 49. Boundary Layer Velocity Profiles
Run No. 10 Point No. 1

78-12-100-2

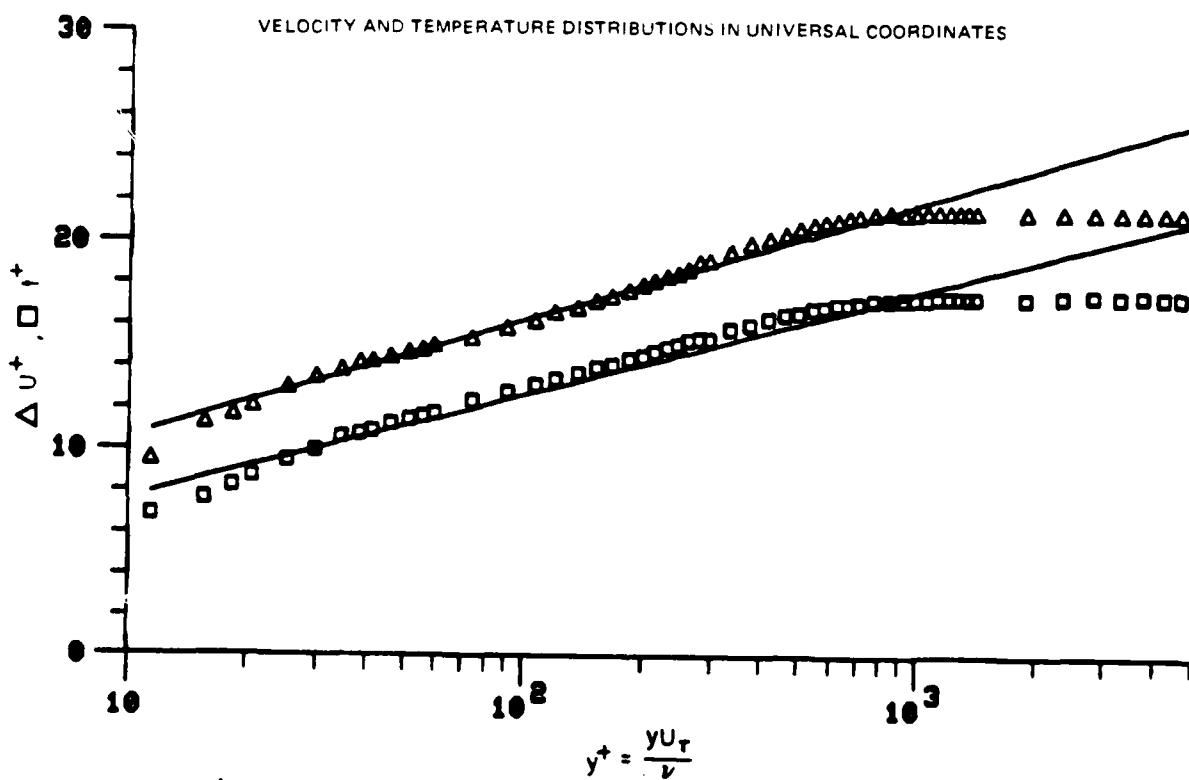
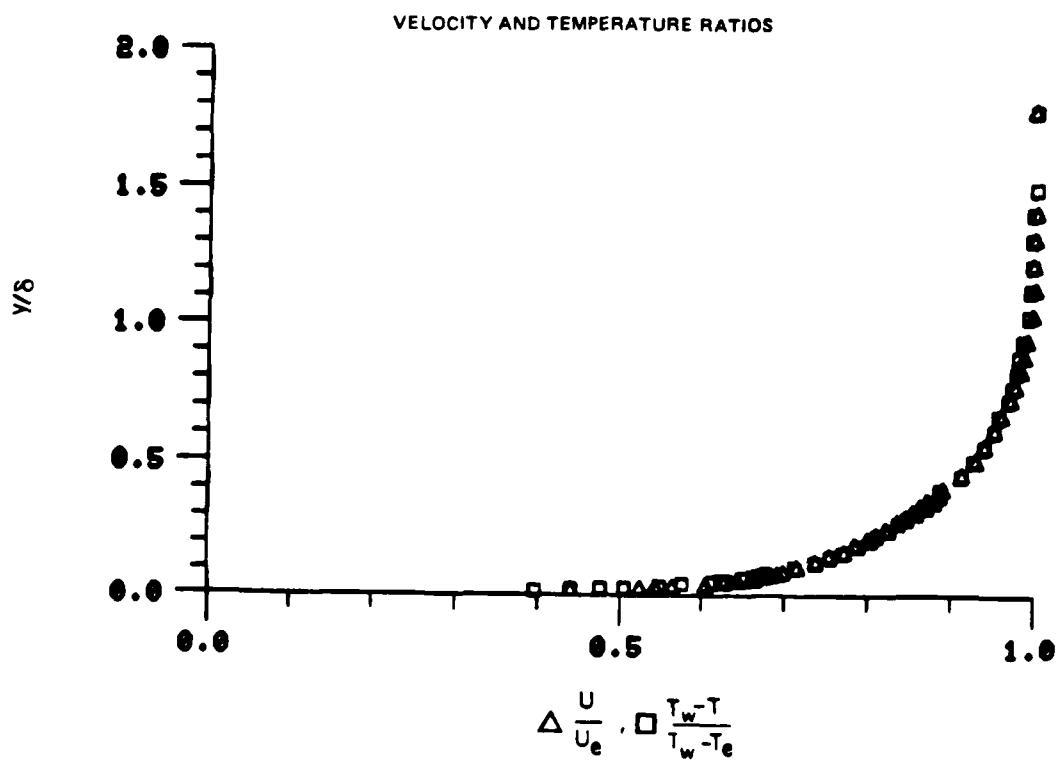


Figure 50. Boundary Layer Velocity and Temperature Profiles
 Run No. 10 Point No. 2

78-12-100-1

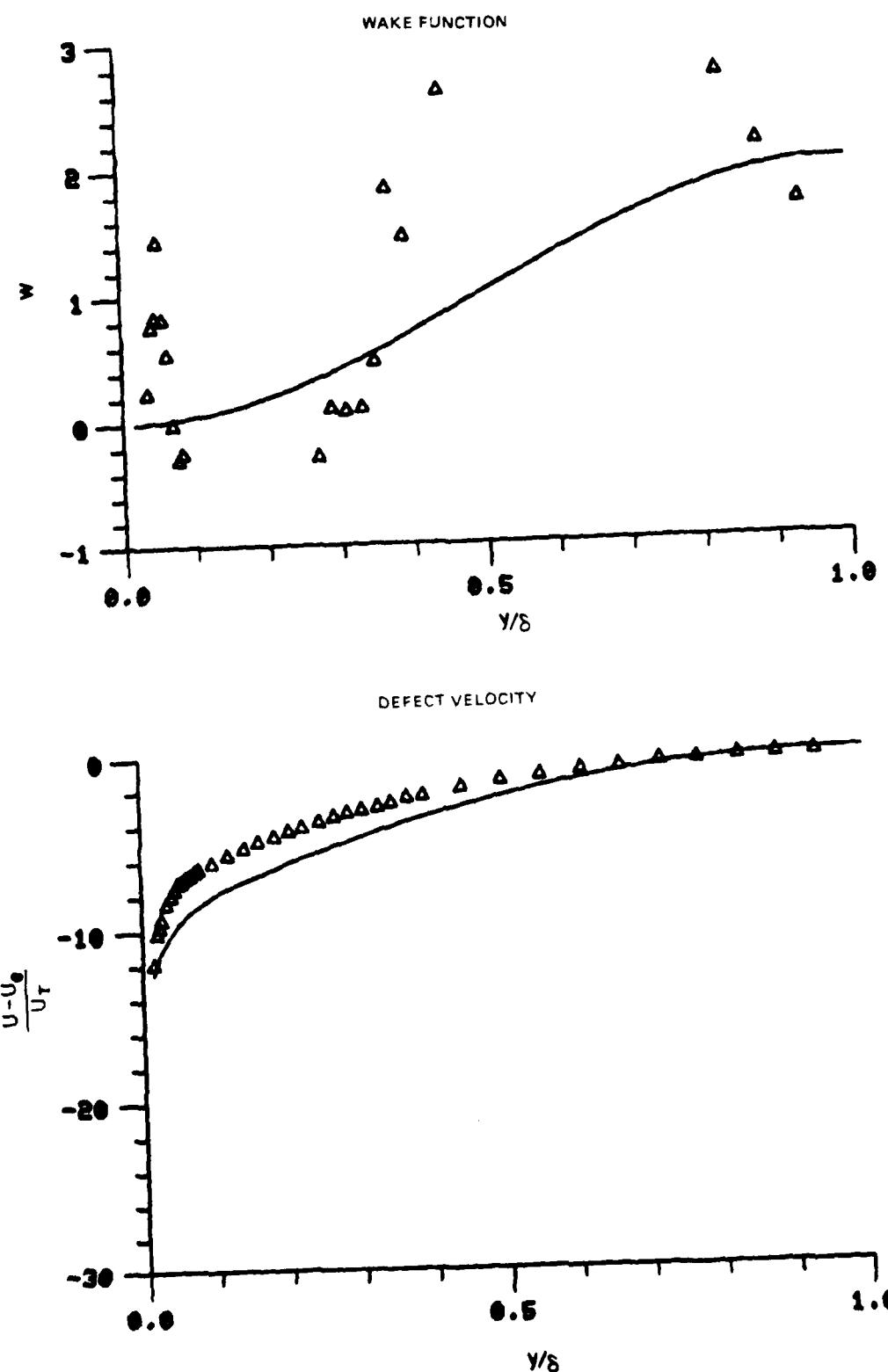


Figure 50. Boundary Layer Velocity Profiles
Run No. 10 Point No. 2

78-12-100-2

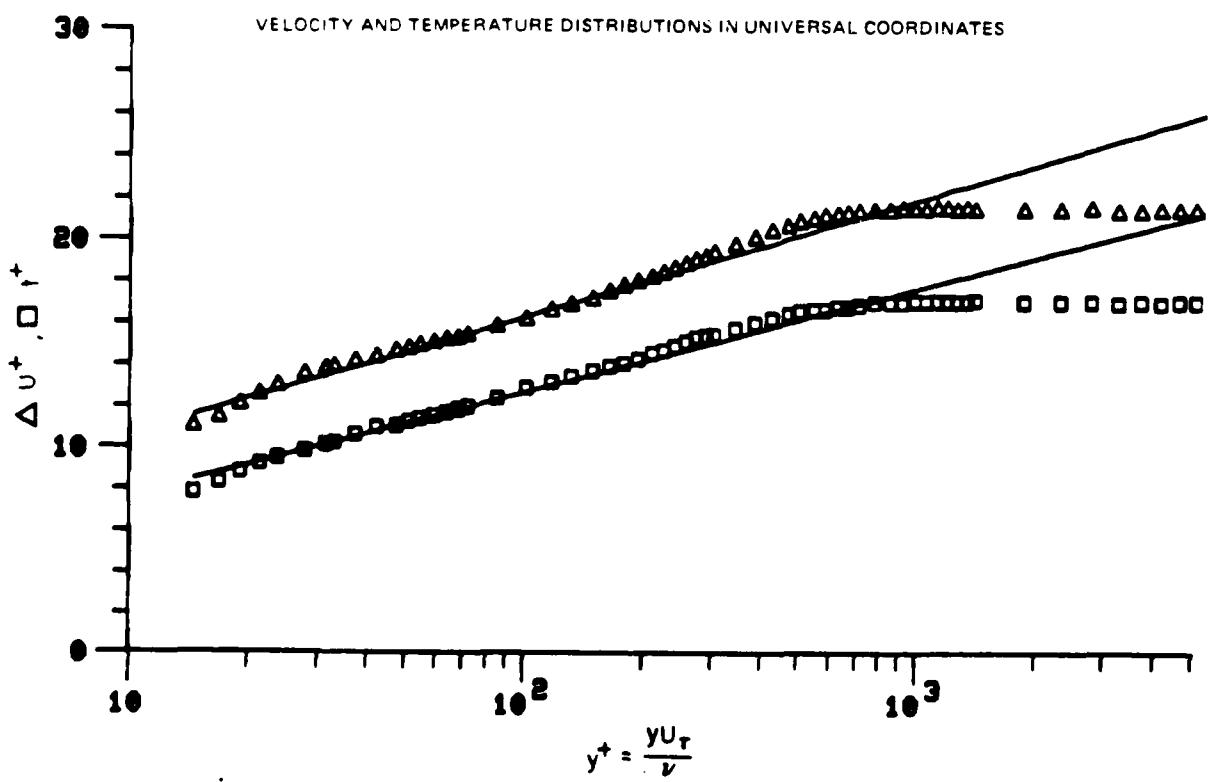
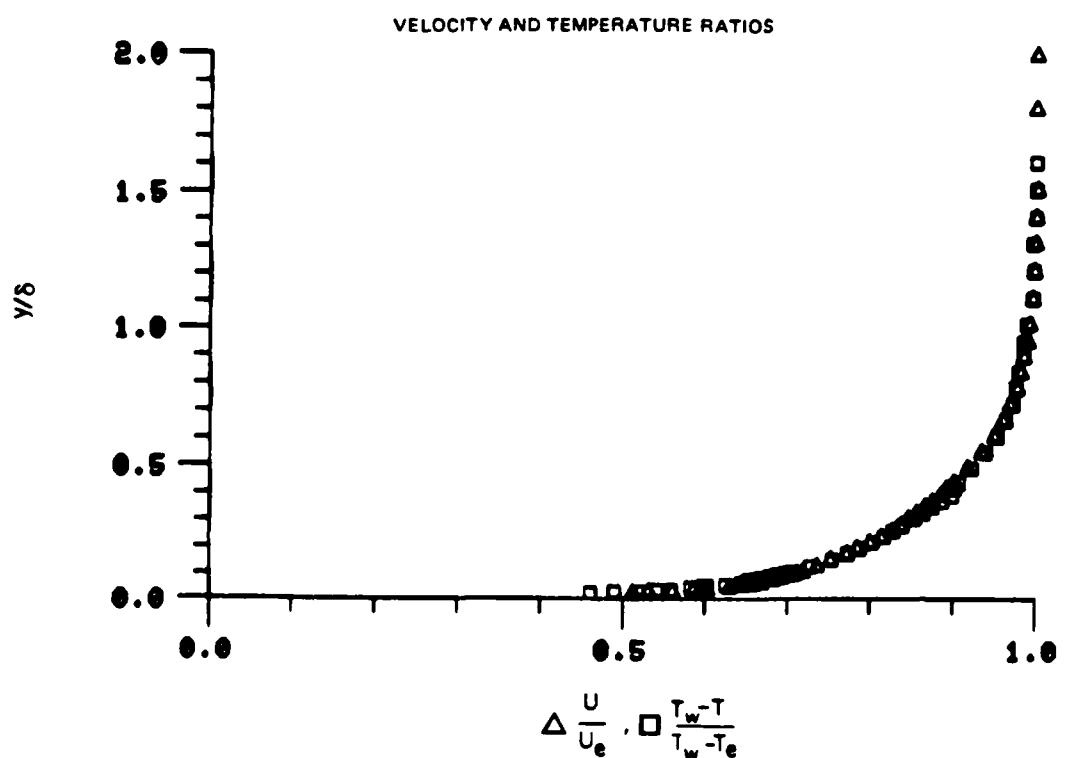


Figure 51. Boundary Layer Velocity and Temperature Profiles
Run No. 10 Point No. 3

78-12-100-1

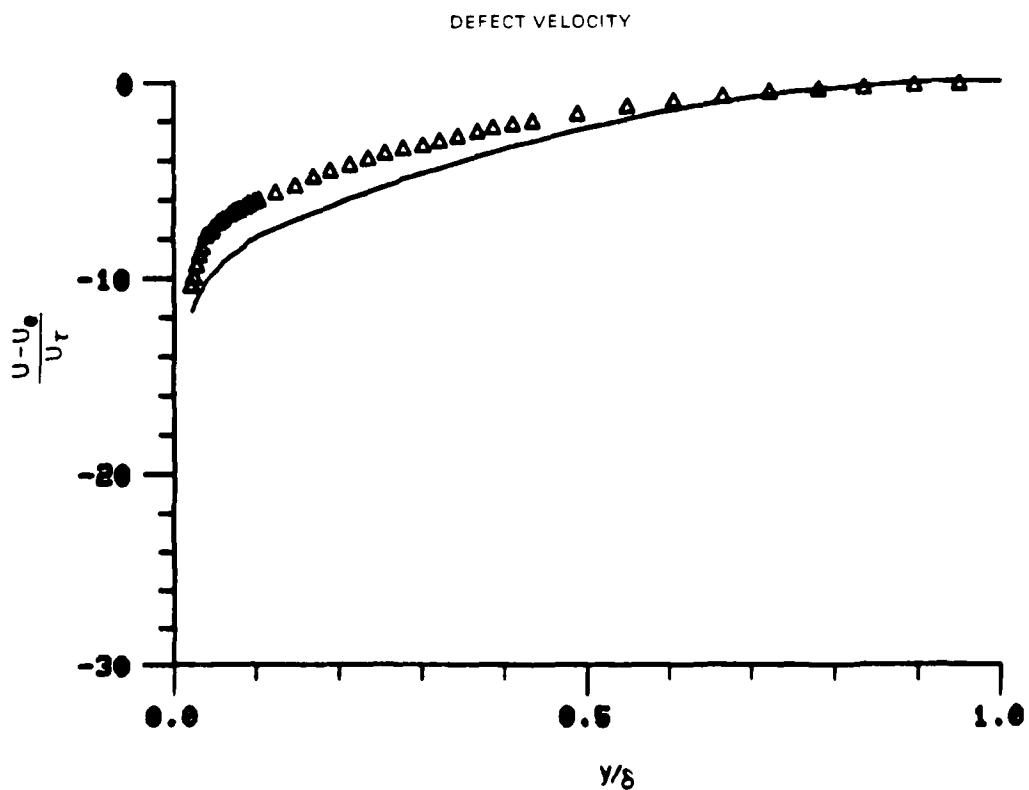
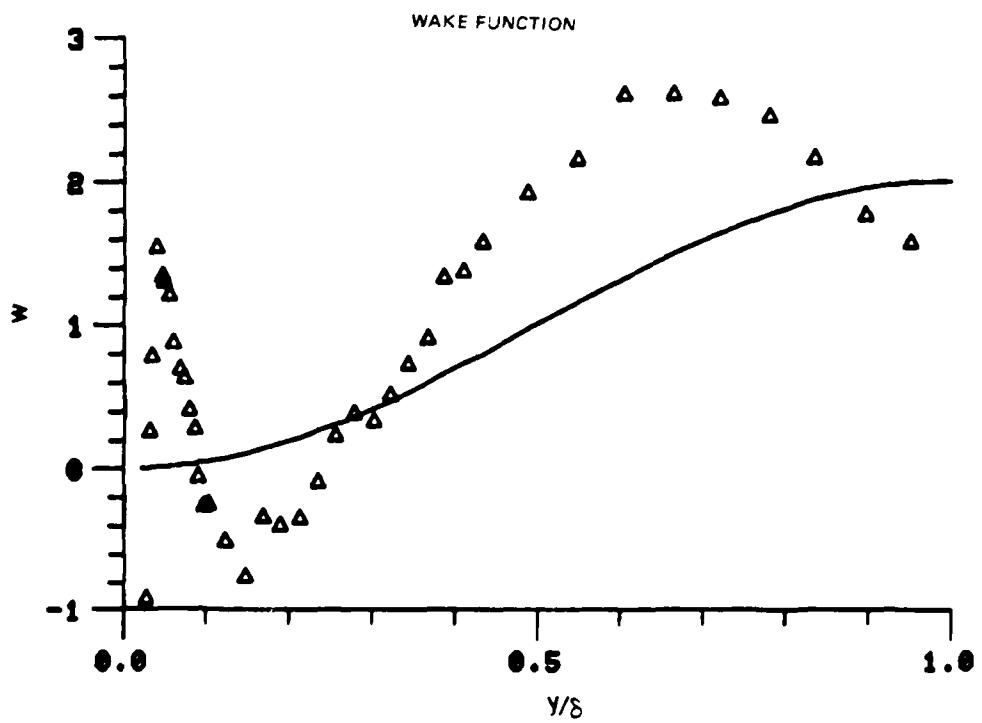


Figure 51. Boundary Layer Velocity Profiles
Run No. 10 Point No. 3

78-12-100-2

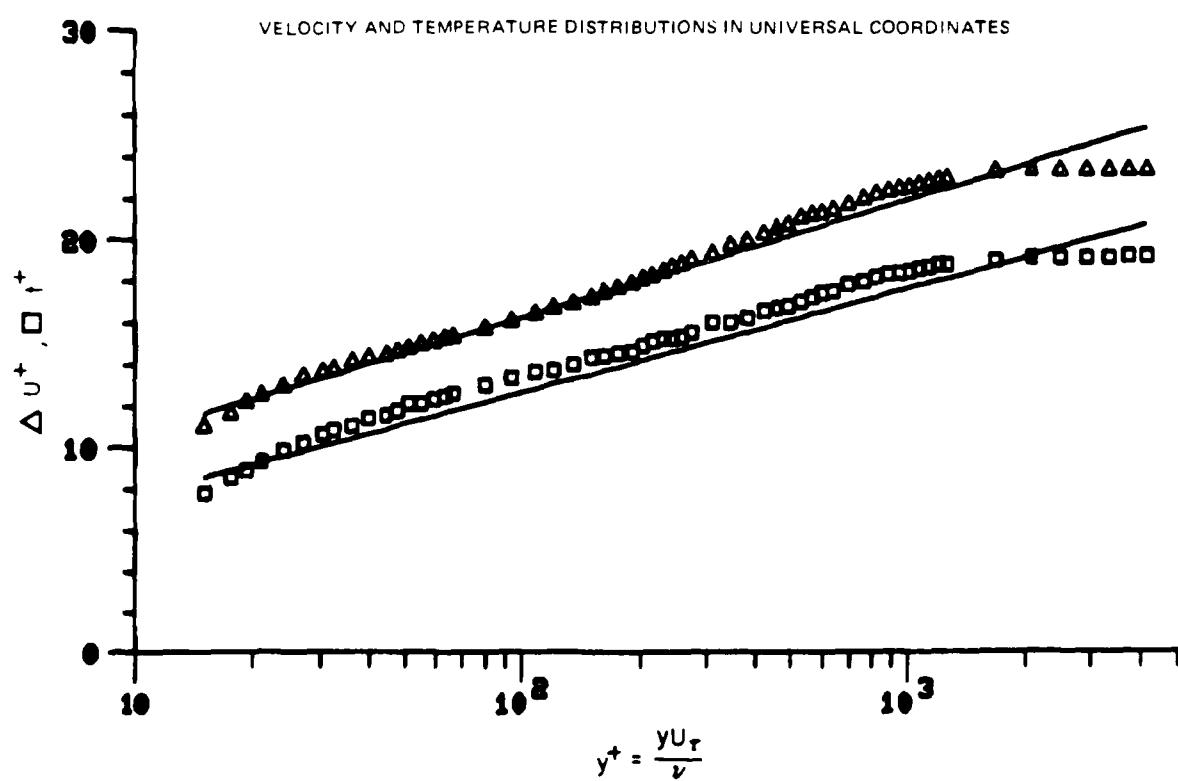
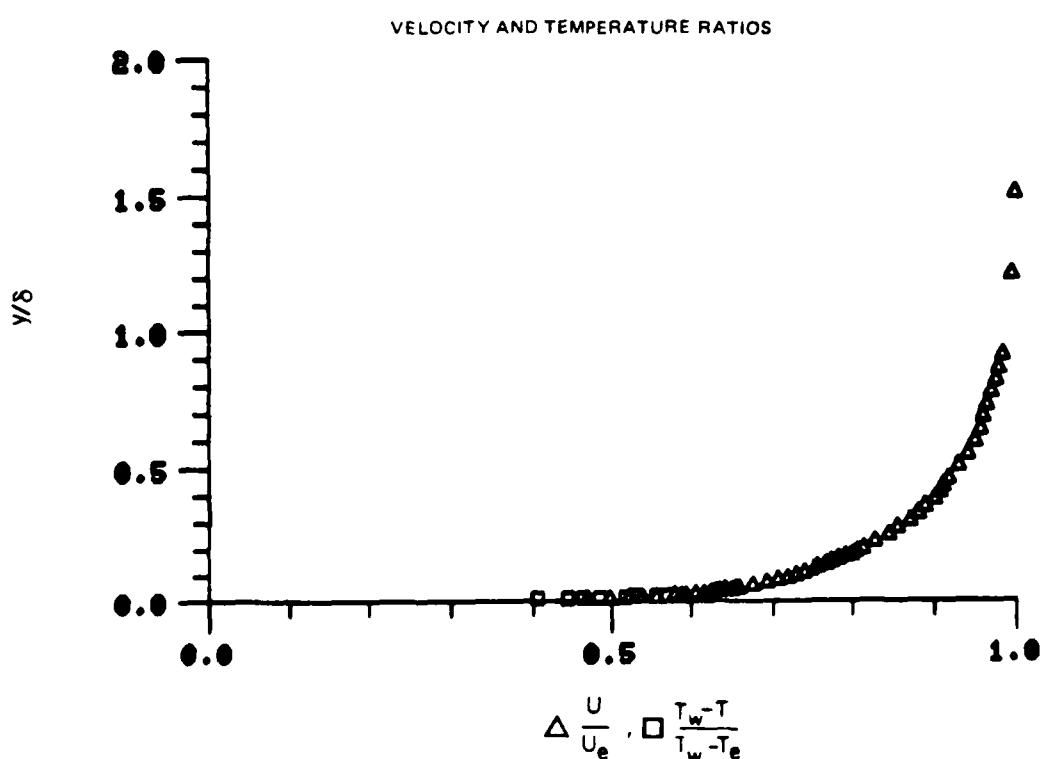


Figure 52. Boundary Layer Velocity and Temperature Profiles
Run No. 6 Point No. 7

78-12-100-1

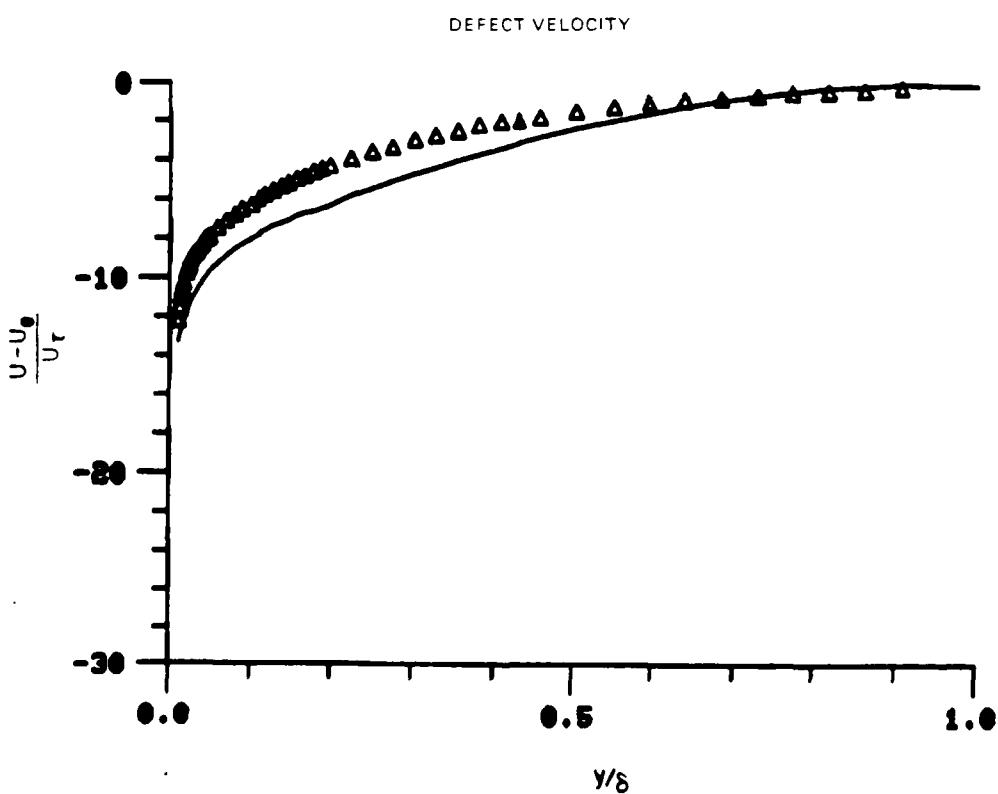
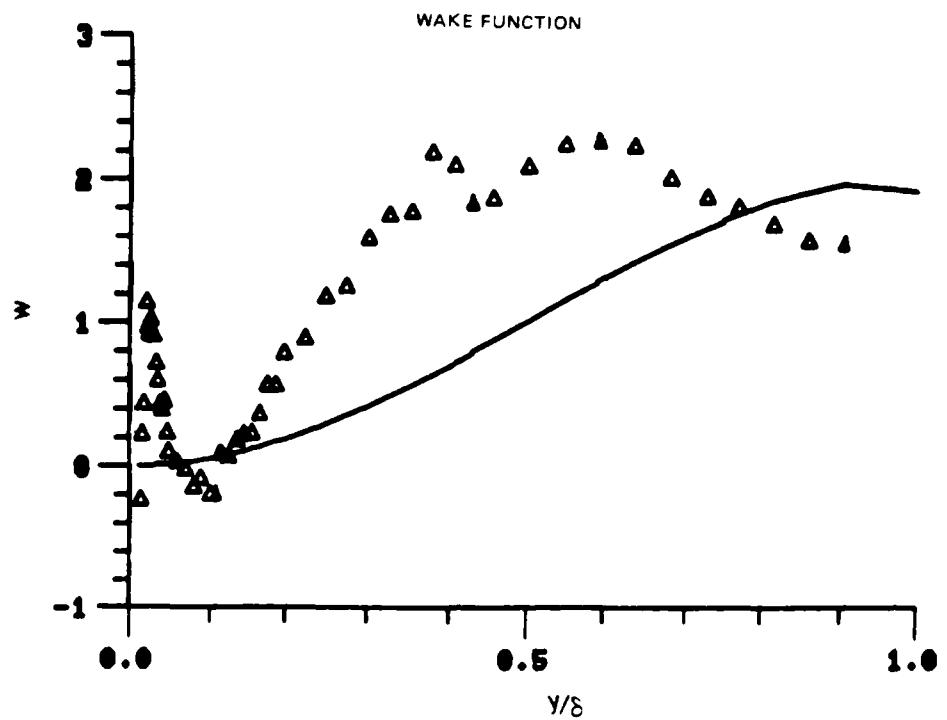
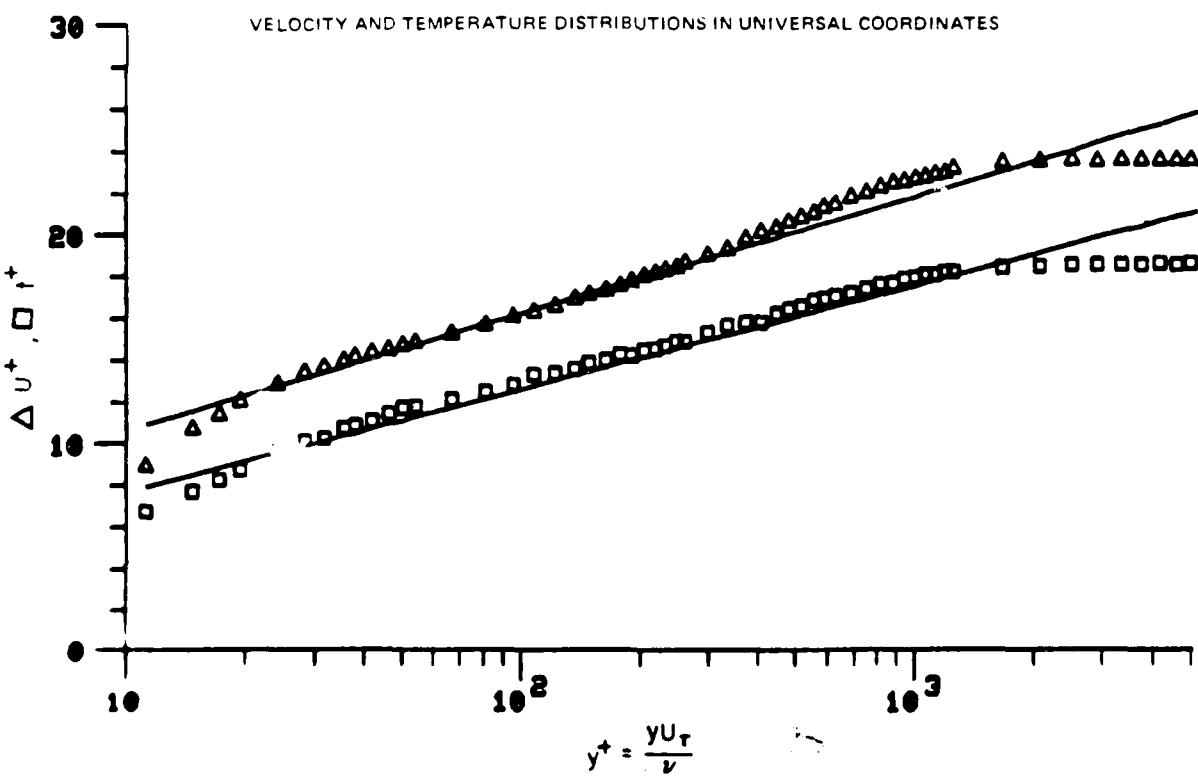
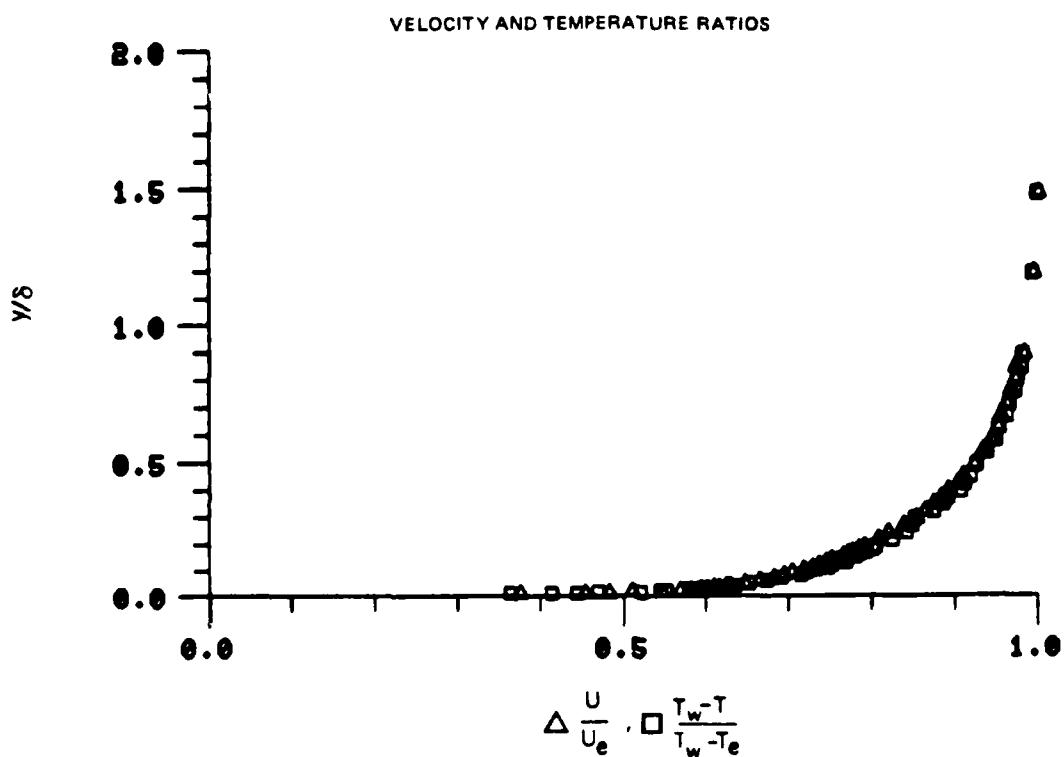


Figure 52. Boundary Layer Velocity Profiles
Run No. 6 Point No. 7

78-12-100-2



Boundary Layer Velocity and Temperature Profiles
Run No. 10 Point No. 4

78-12-100-1

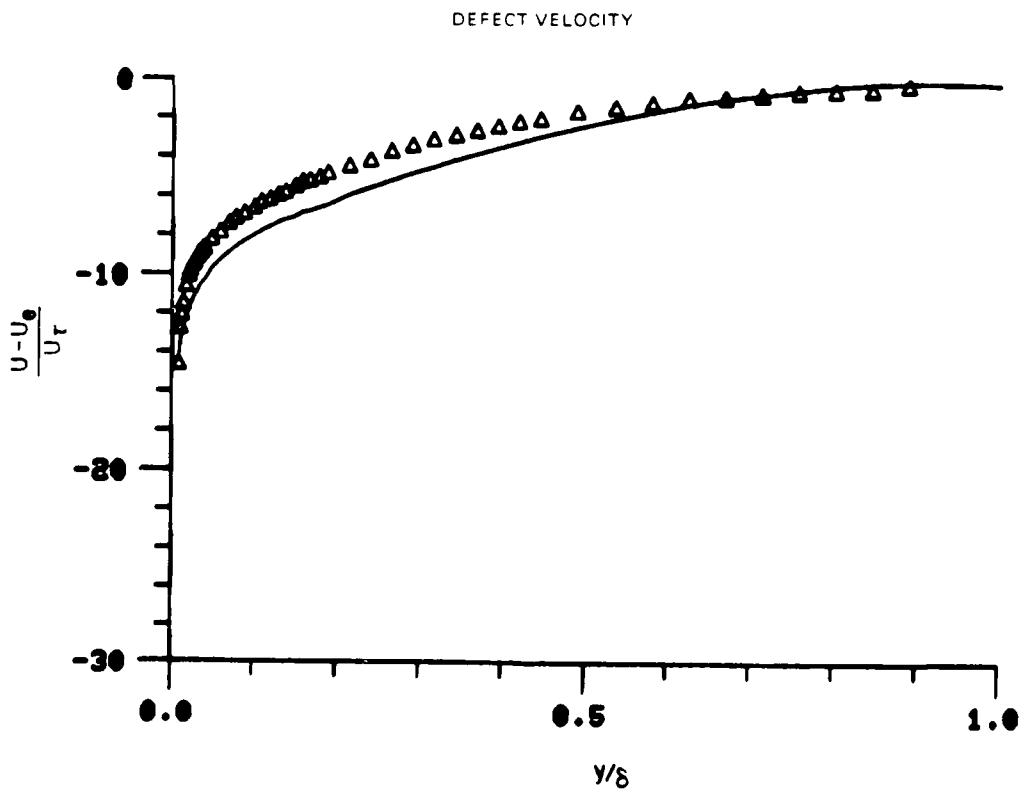
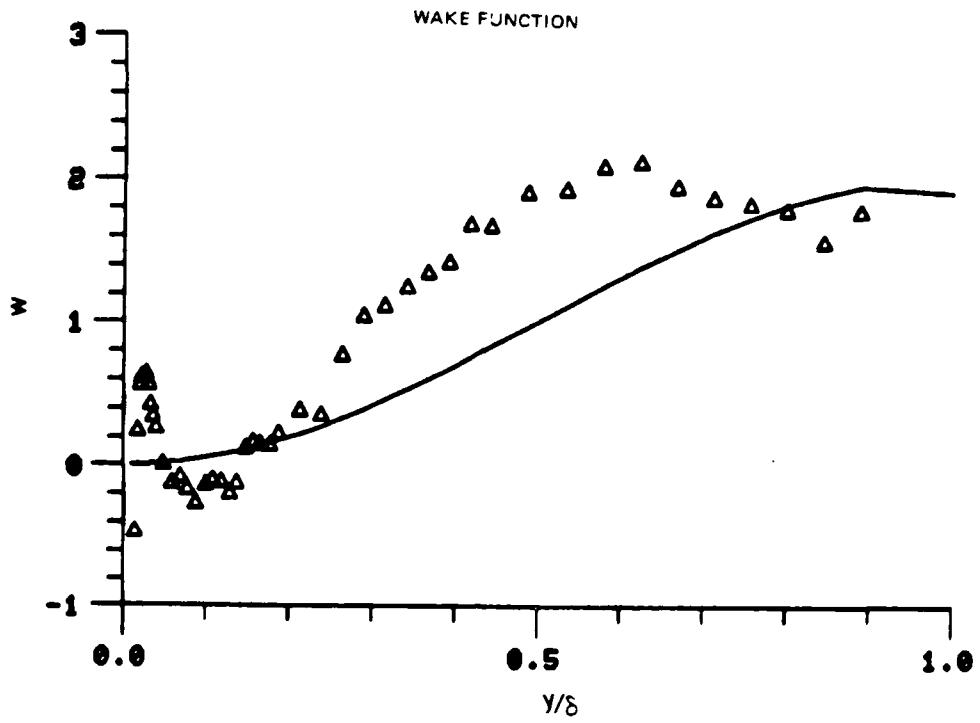


Figure 53. Boundary Layer Velocity Profiles
Run No.10 Point No. 4

78-12-100-2

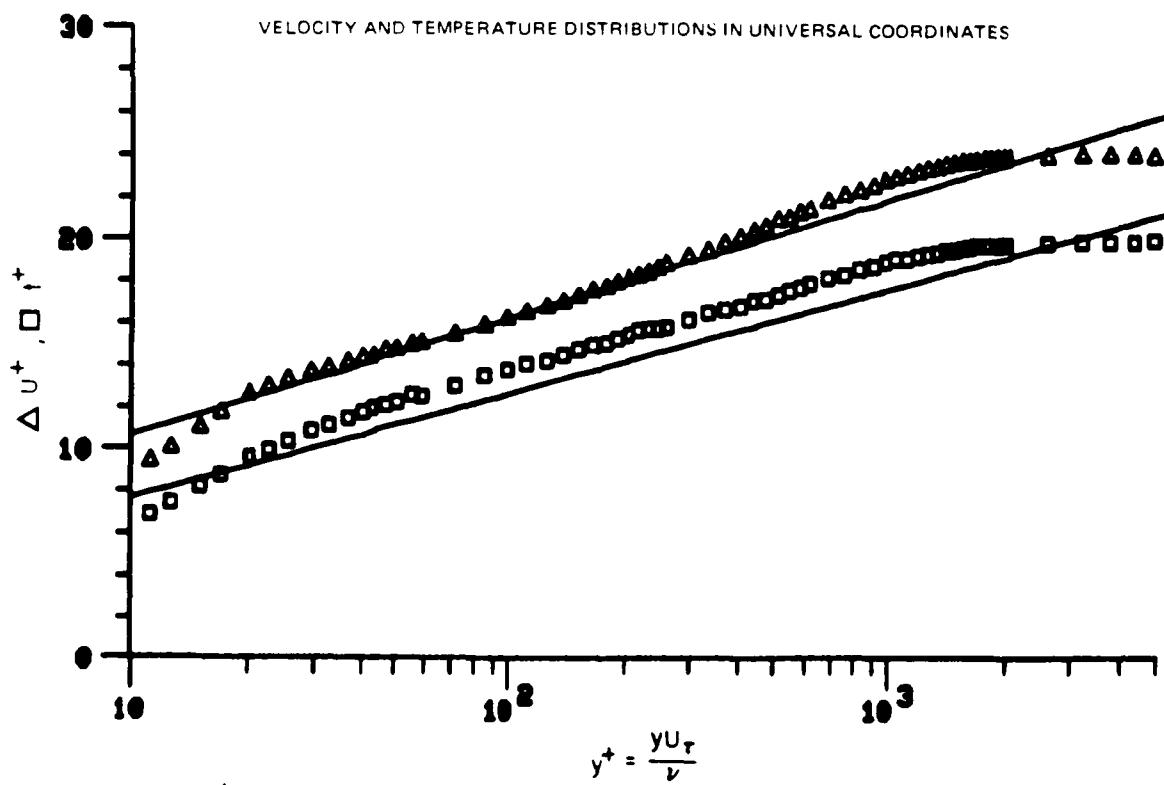
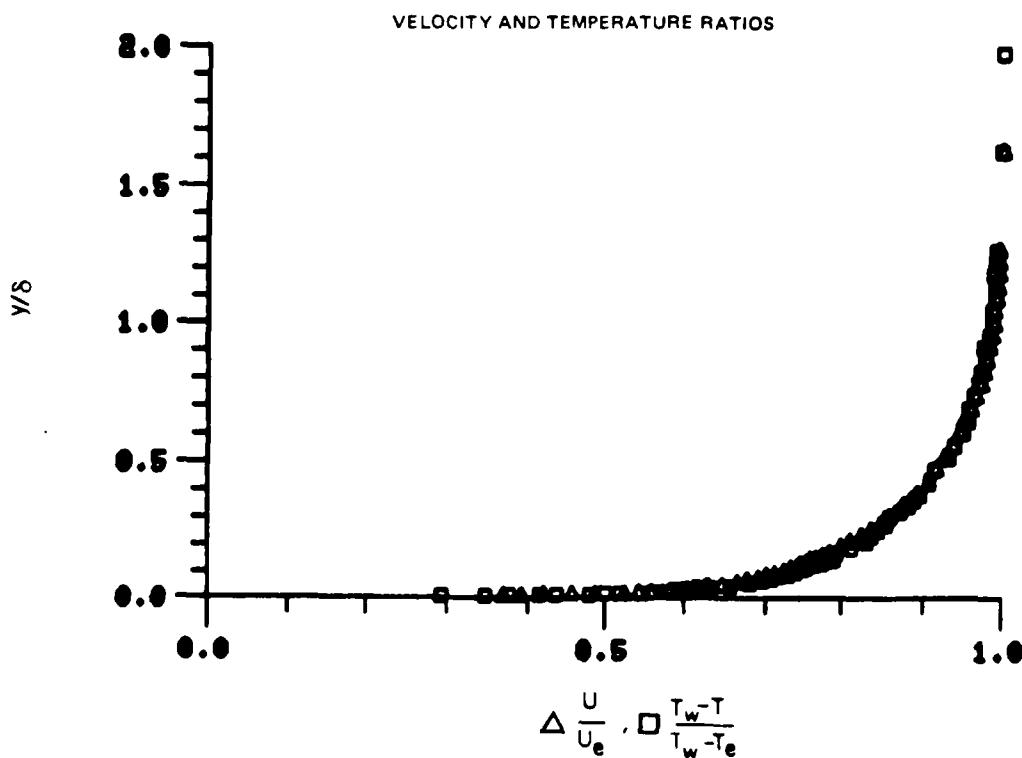


Figure 54. Boundary Layer Velocity and Temperature Profiles
Run No. 6 Point No. 11

78-12-100-1

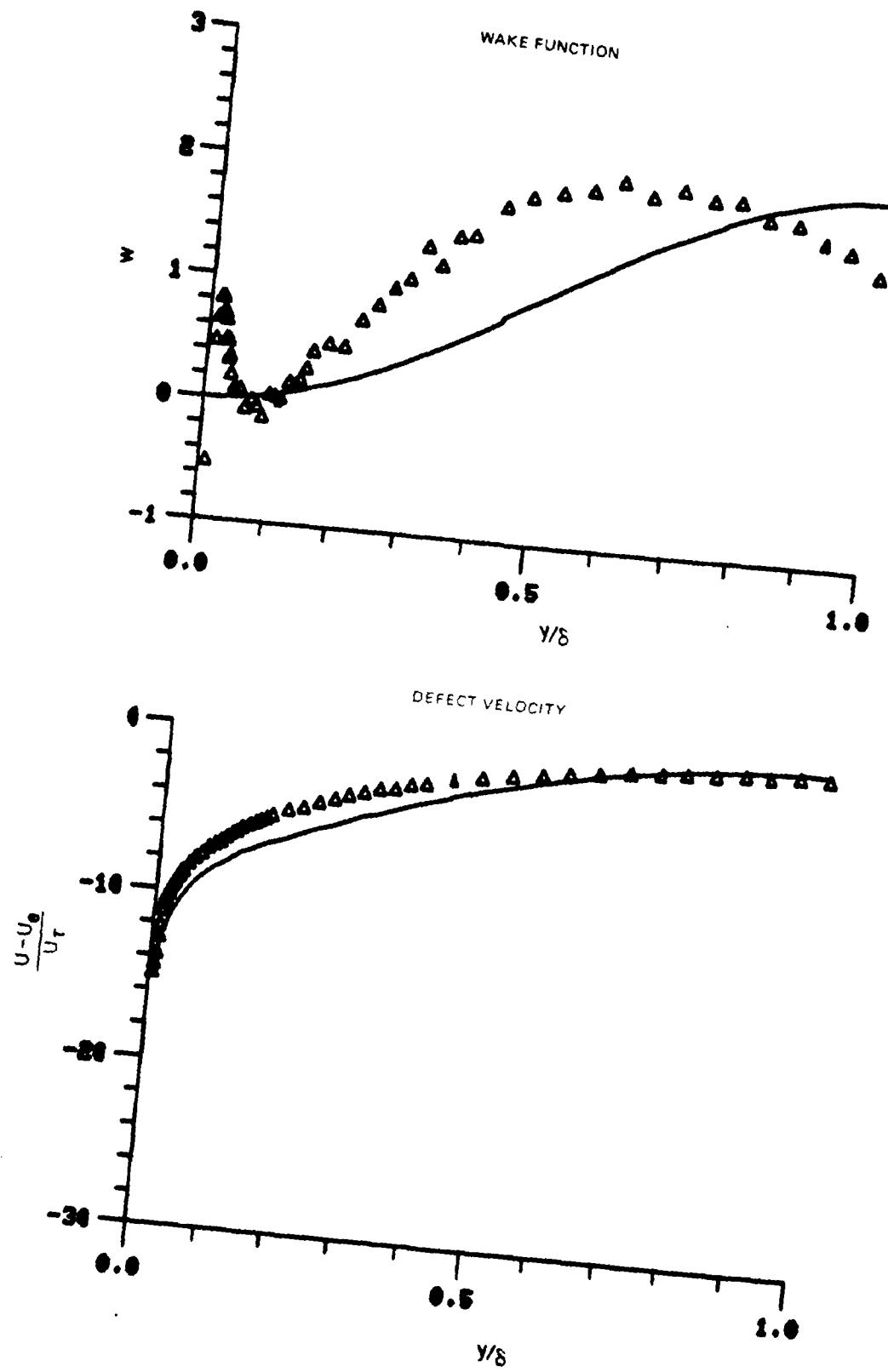


Figure 54. Boundary Layer Velocity Profiles
Run No. 6 Point No. 11

78-12-100-2

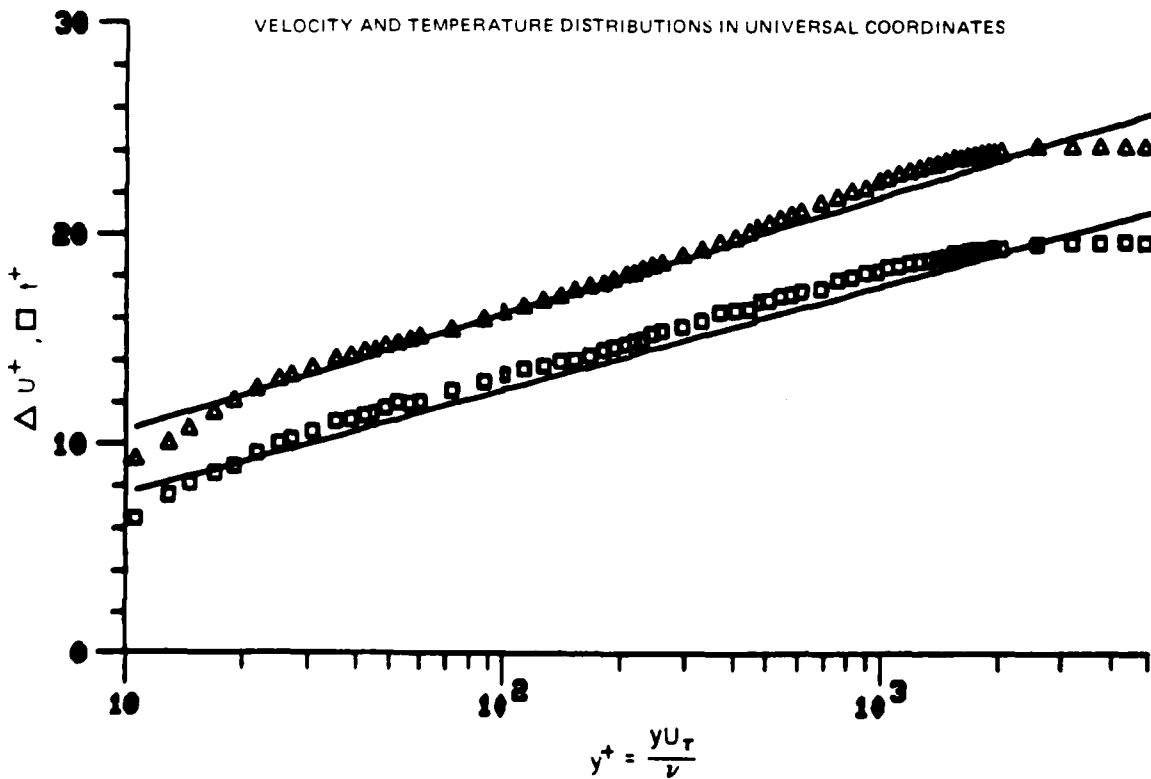
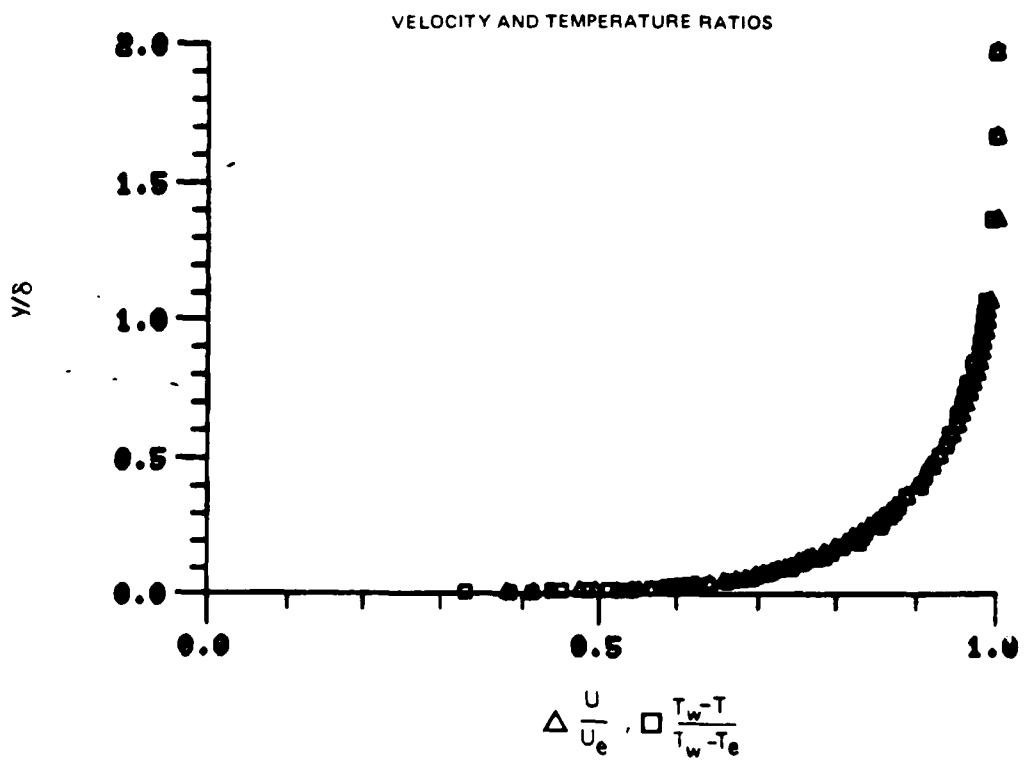


Figure 55. Boundary Layer Velocity and Temperature Profiles
Run No. 6 Point No. 12

78-12-100-1

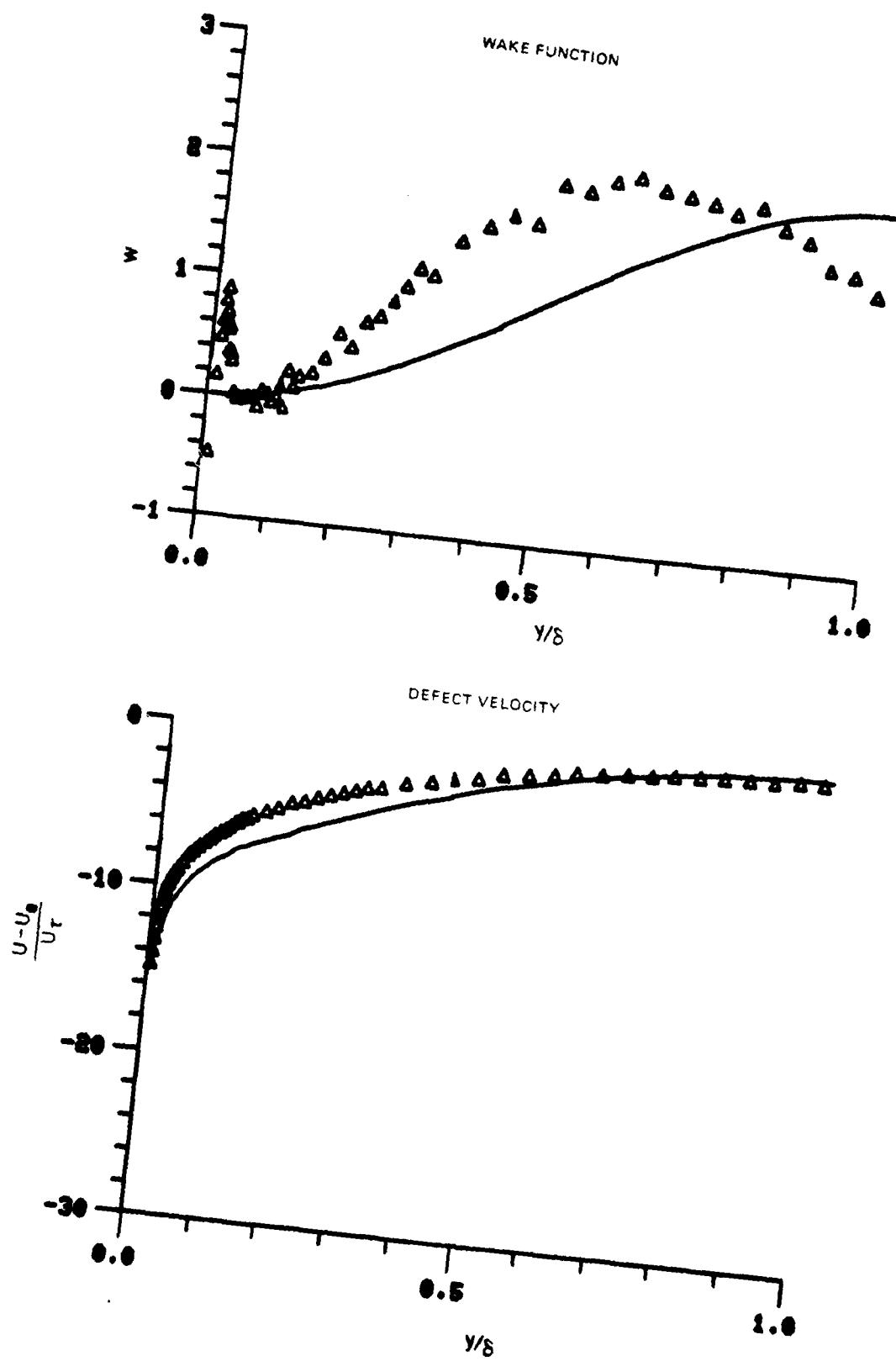


Figure 55. Boundary Layer Velocity Profiles
Run No. 6 Point No. 12

78-12-100-2

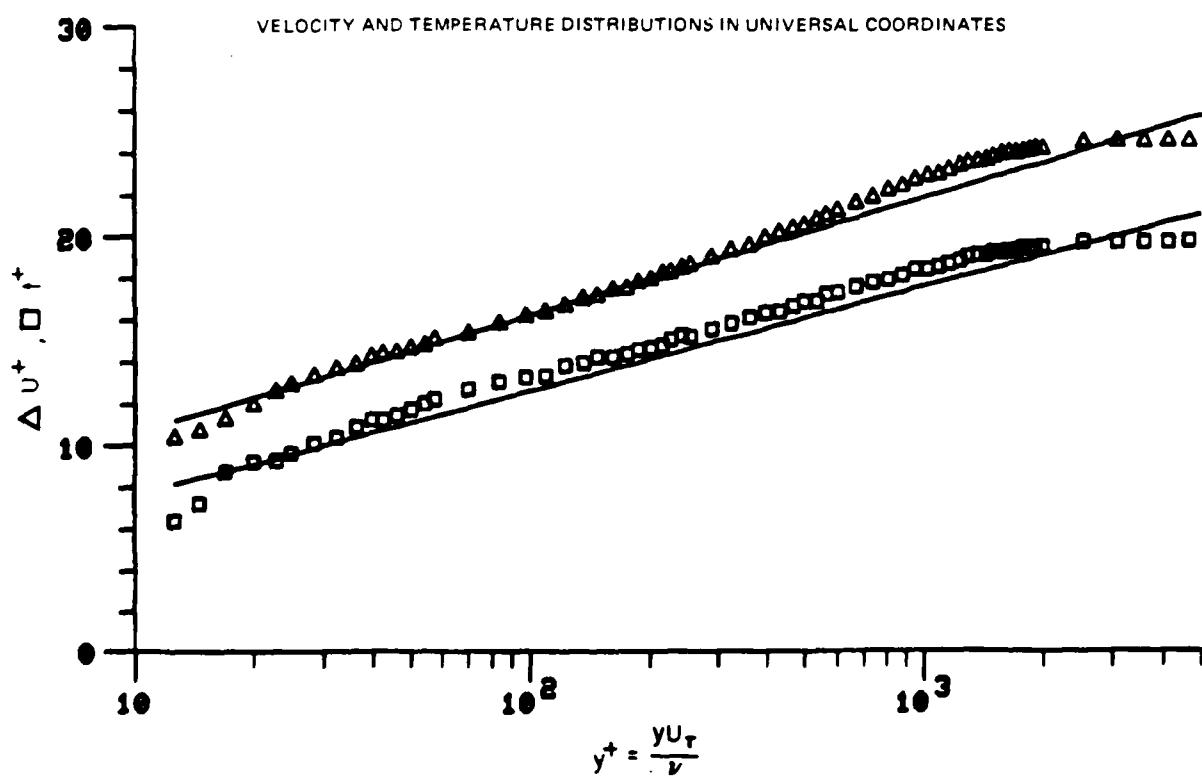
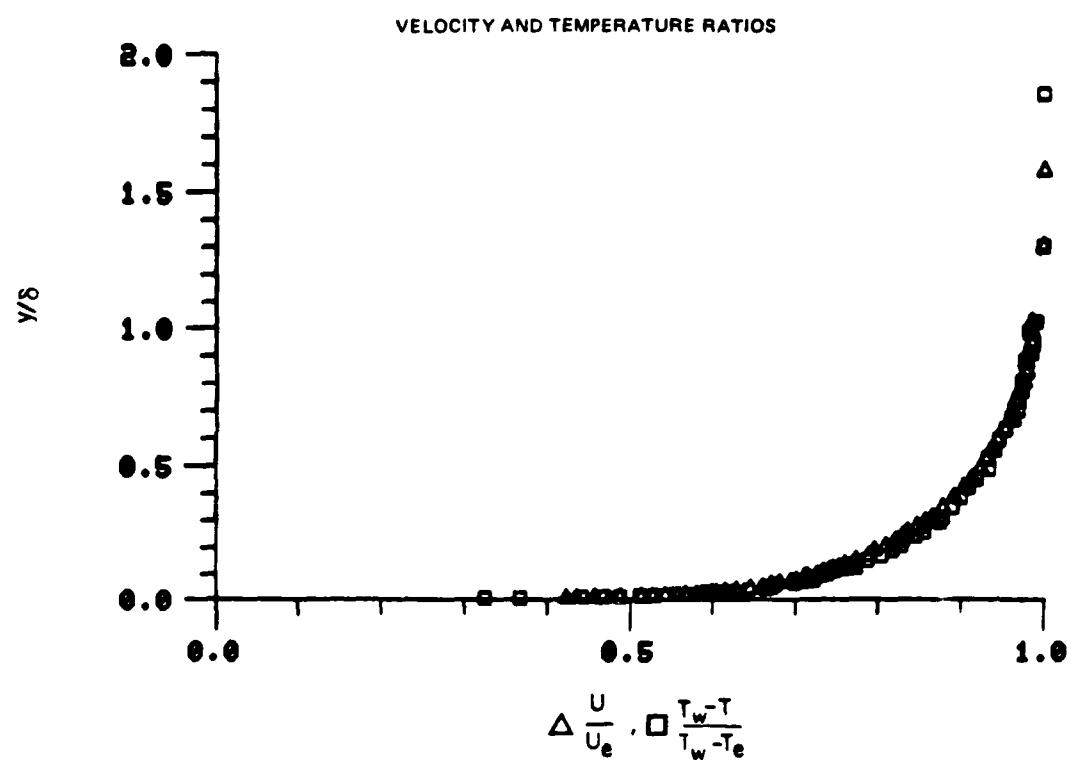


Figure 56. Boundary Layer Velocity and Temperature Profiles

Run No. 10 Point No. 6

78-12-100-1

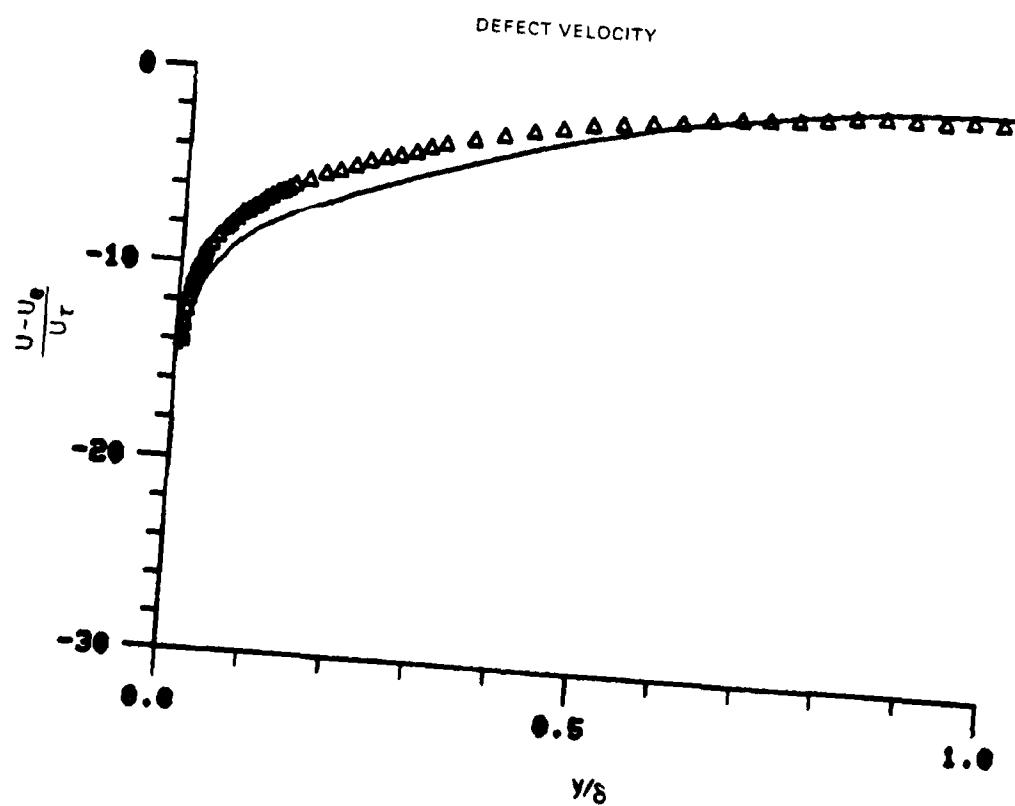
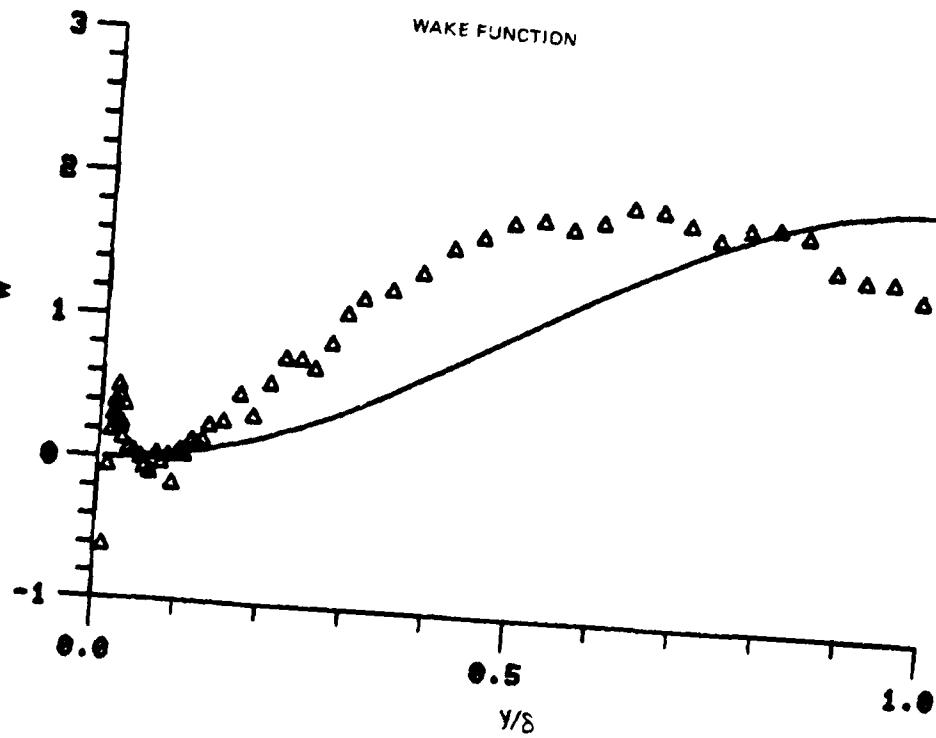


Figure 56. Boundary Layer Velocity Profiles
Run No. 10 Point No. 6

78-12-100-2

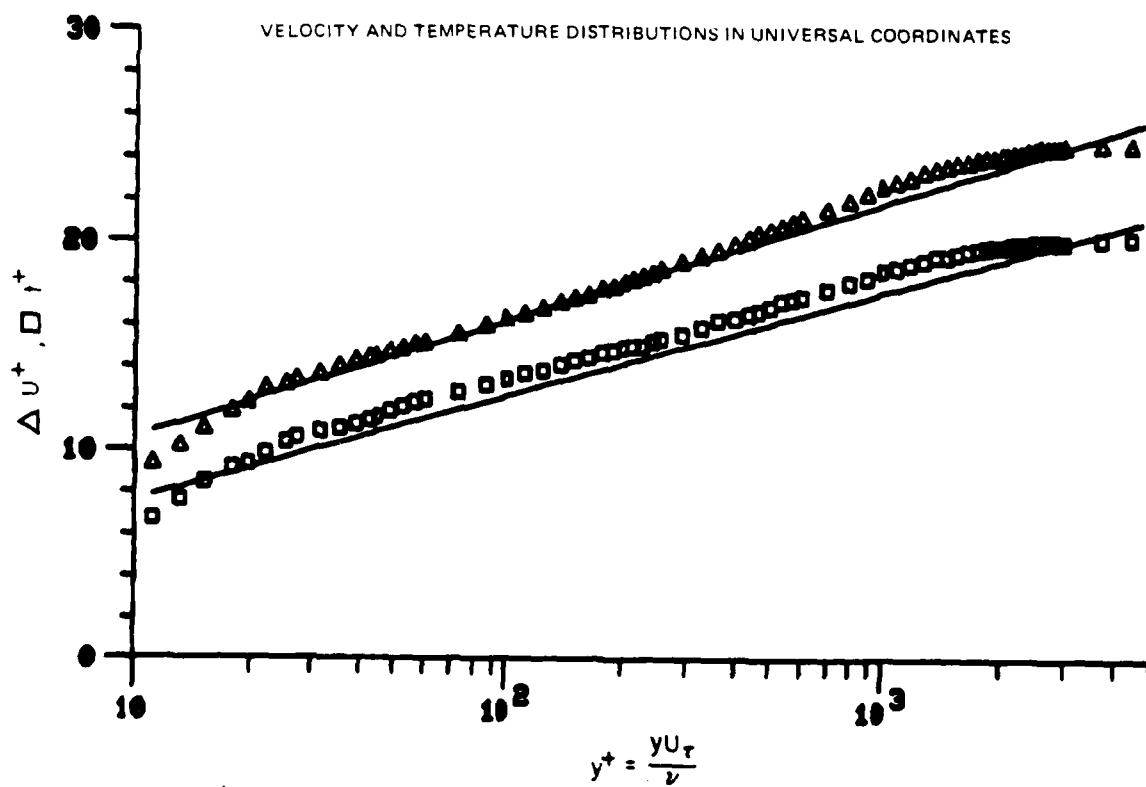
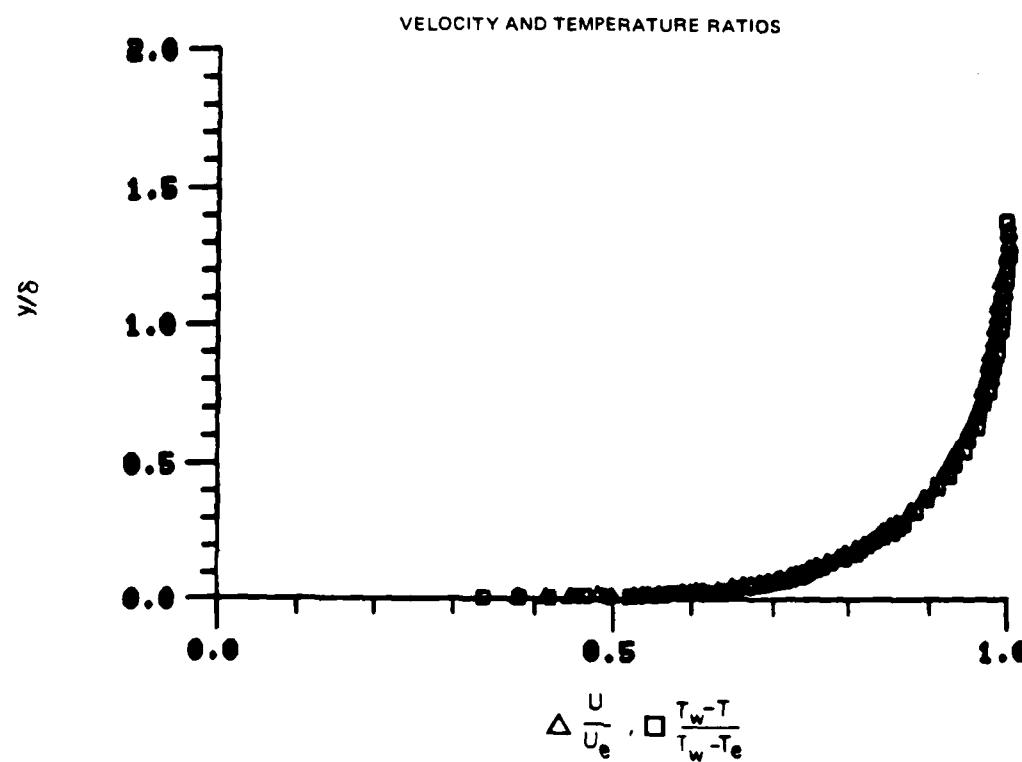


Figure 57. Boundary Layer Velocity and Temperature Profiles
Run No. 6 Point No. 15

78-12-100-1

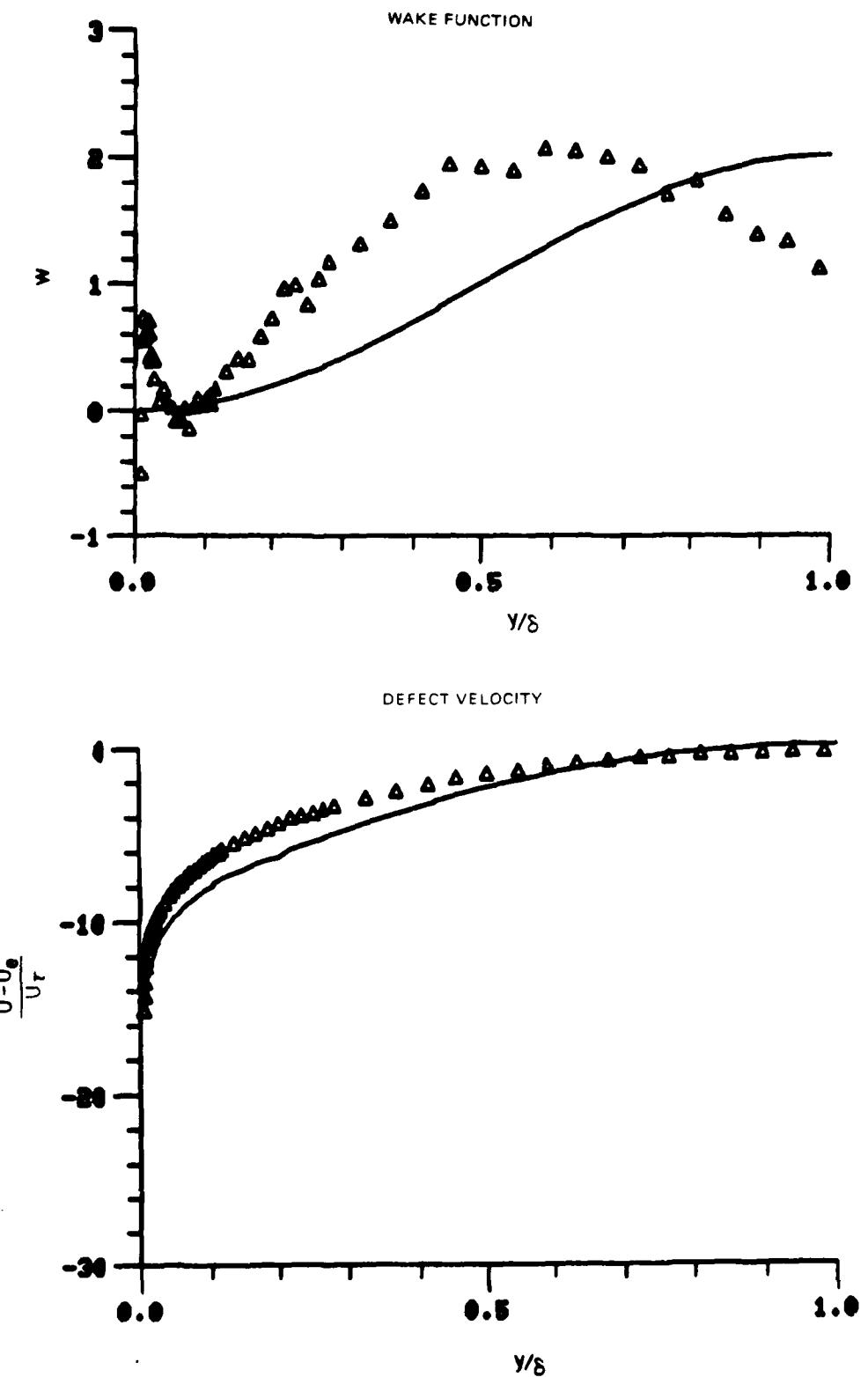


Figure 57. Boundary Layer Velocity Profiles
Run No. 6 Point No. 15

78-12-100-2

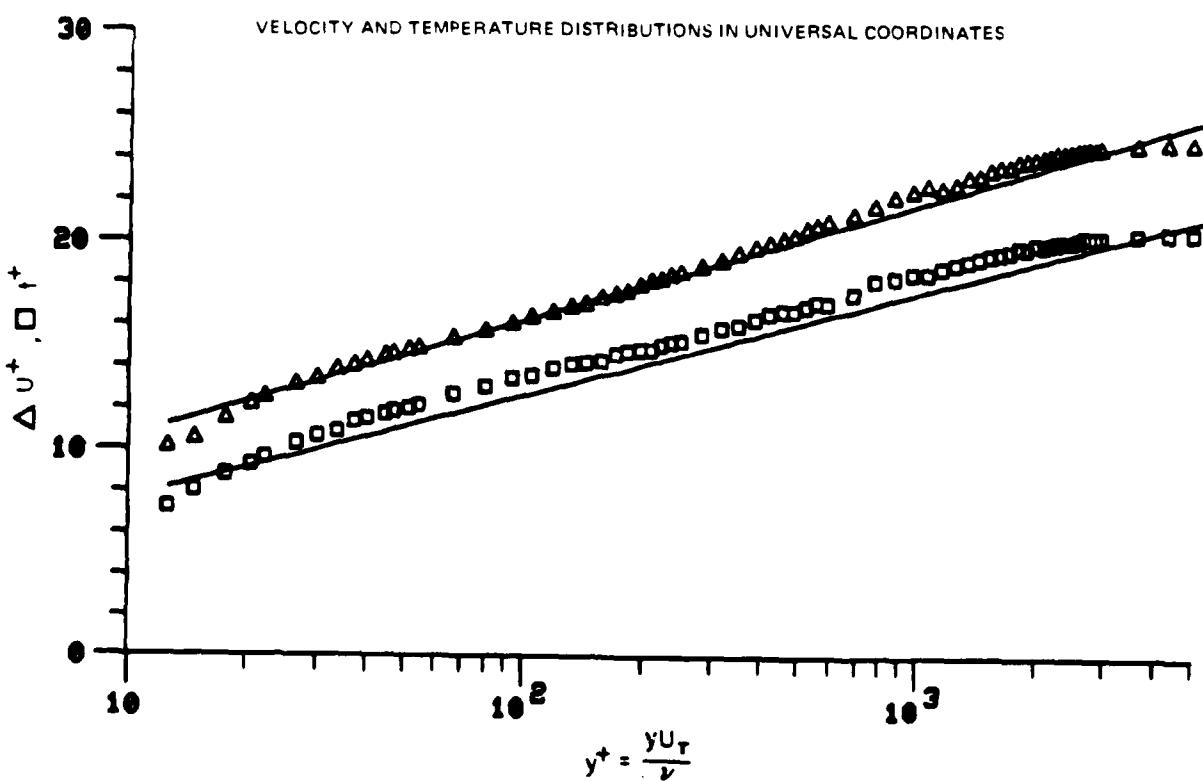
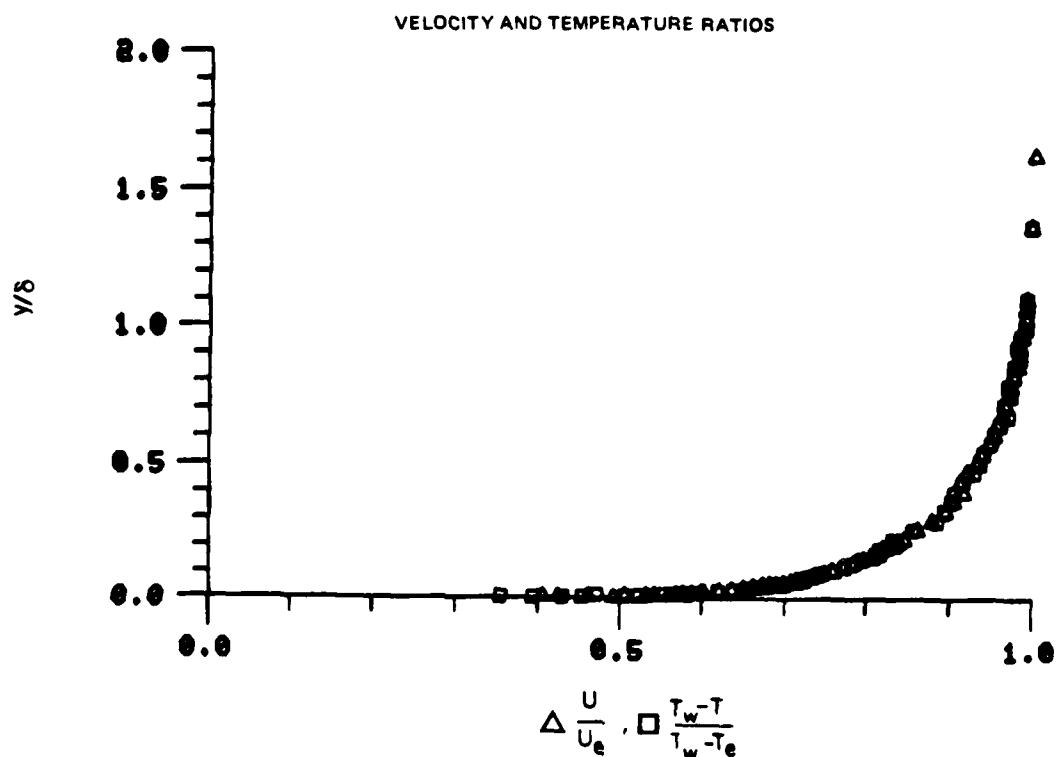


Figure 58. Boundary Layer Velocity and Temperature Profiles
Run No. 10 Point No. 7

78-12-100-1

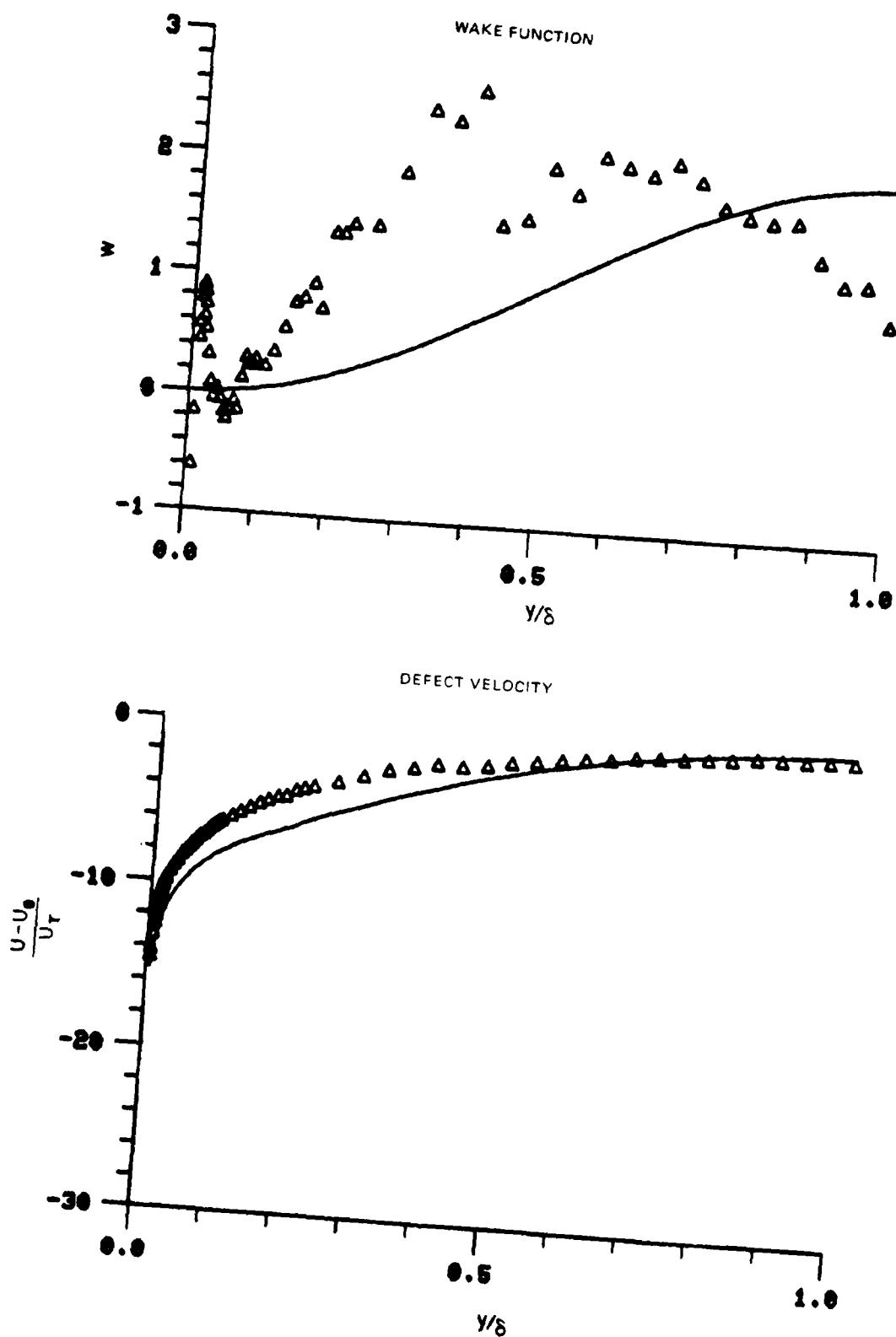


Figure 58. Boundary Layer Velocity Profiles
Run No. 10 Point No. 7

78-12-100-2

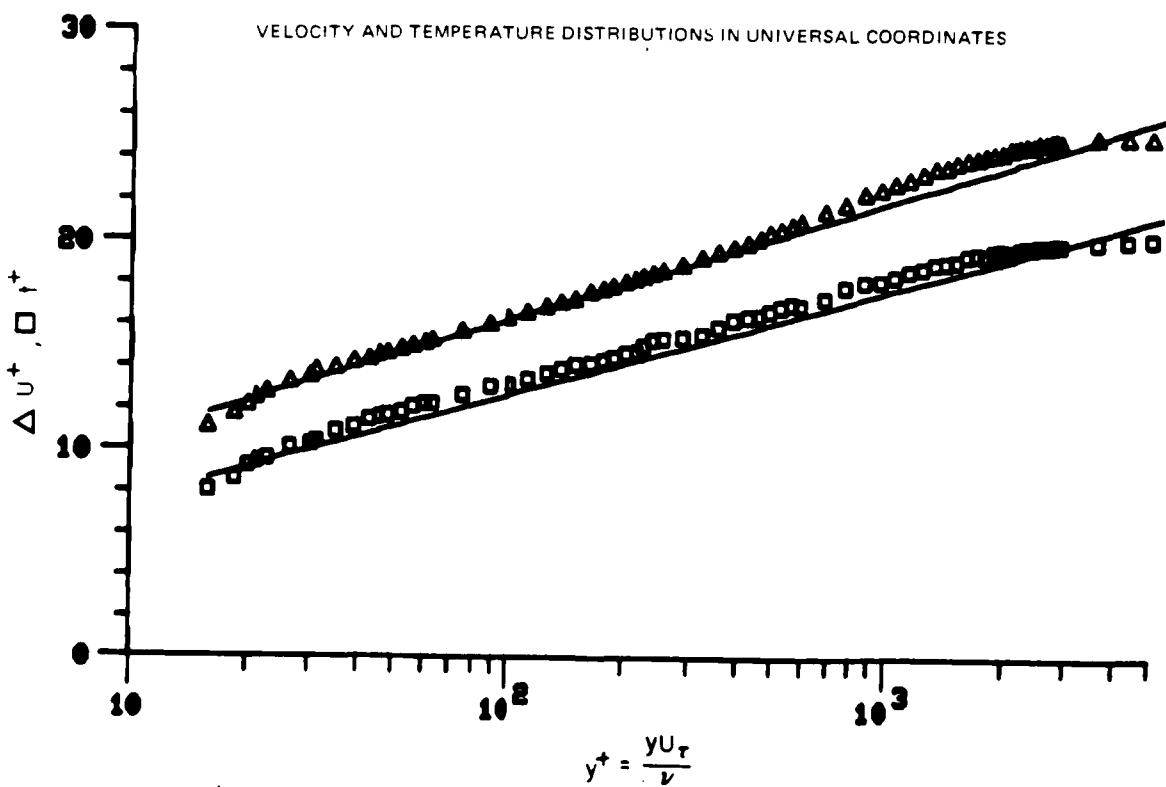
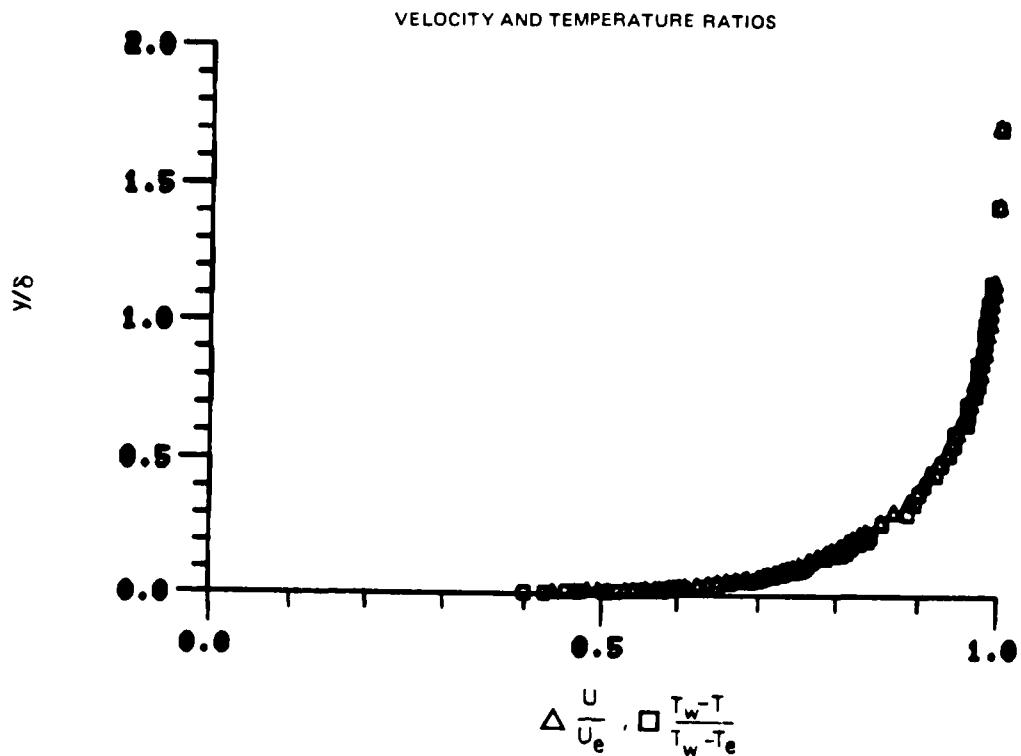


Figure 59. Boundary Layer Velocity and Temperature Profiles
Run No. 6 Point No. 18

78-12-100-1

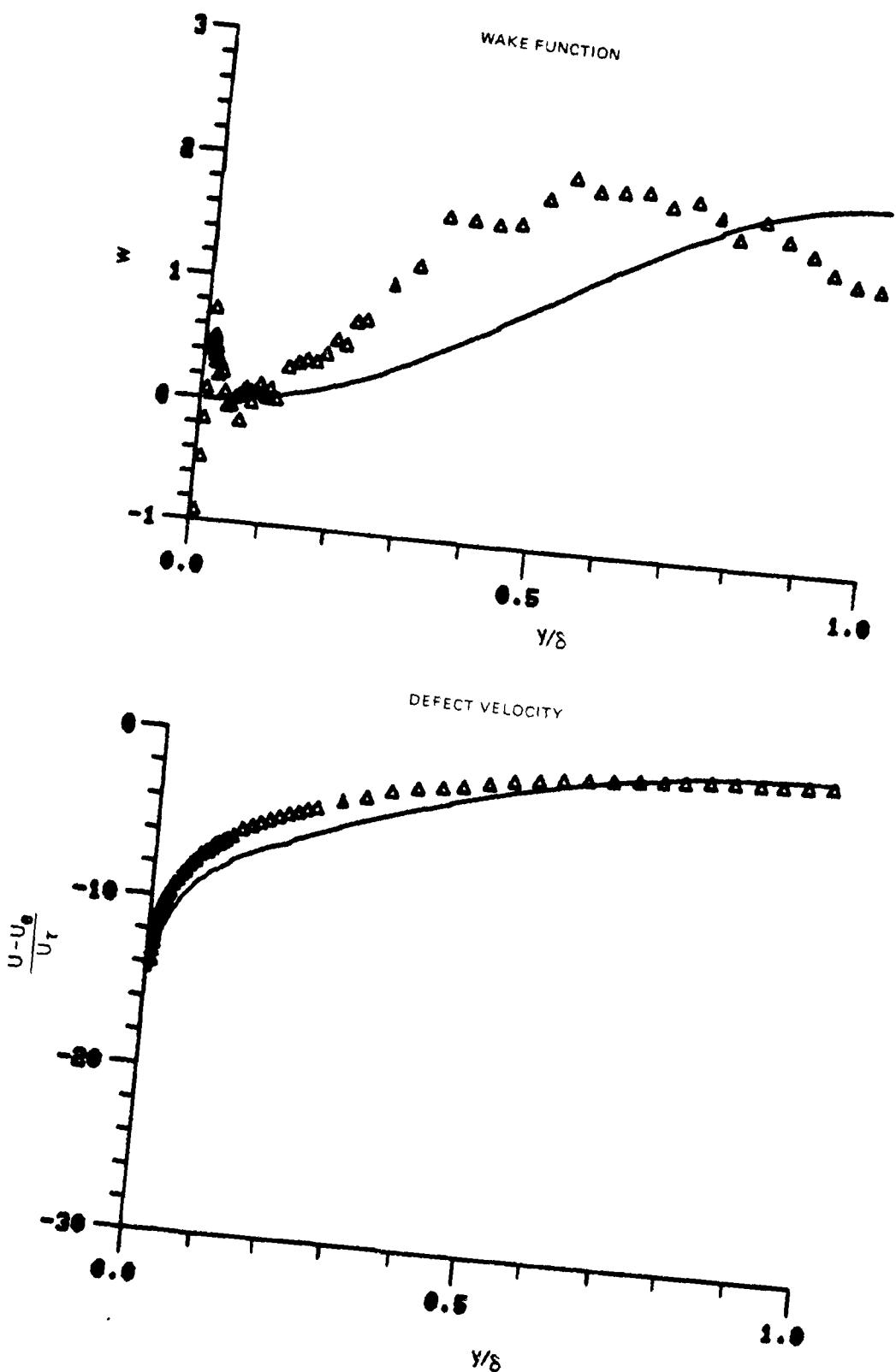


Figure 59. Boundary Layer Velocity Profiles
Run No. 6 Point No. 18

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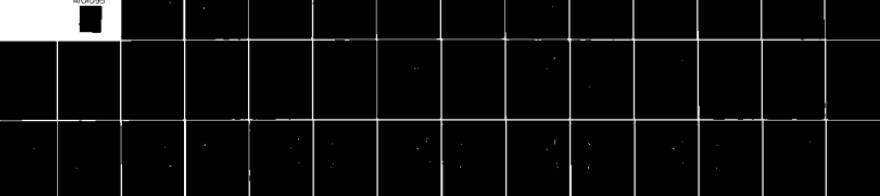
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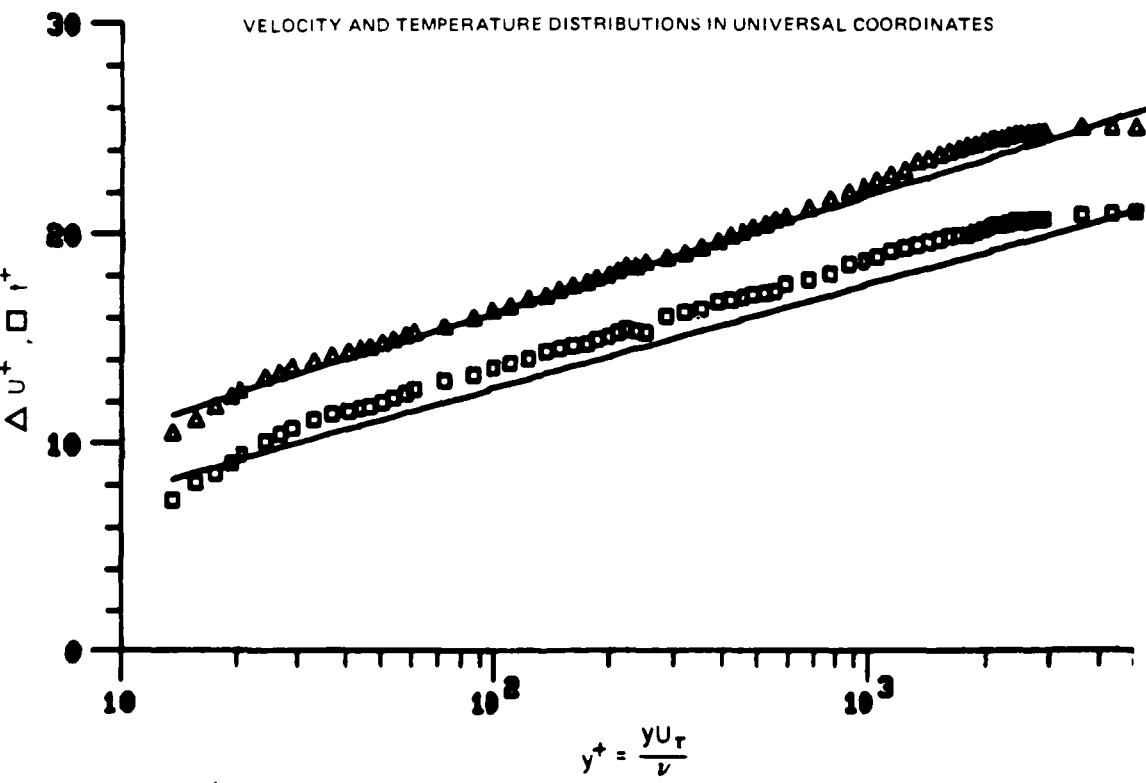
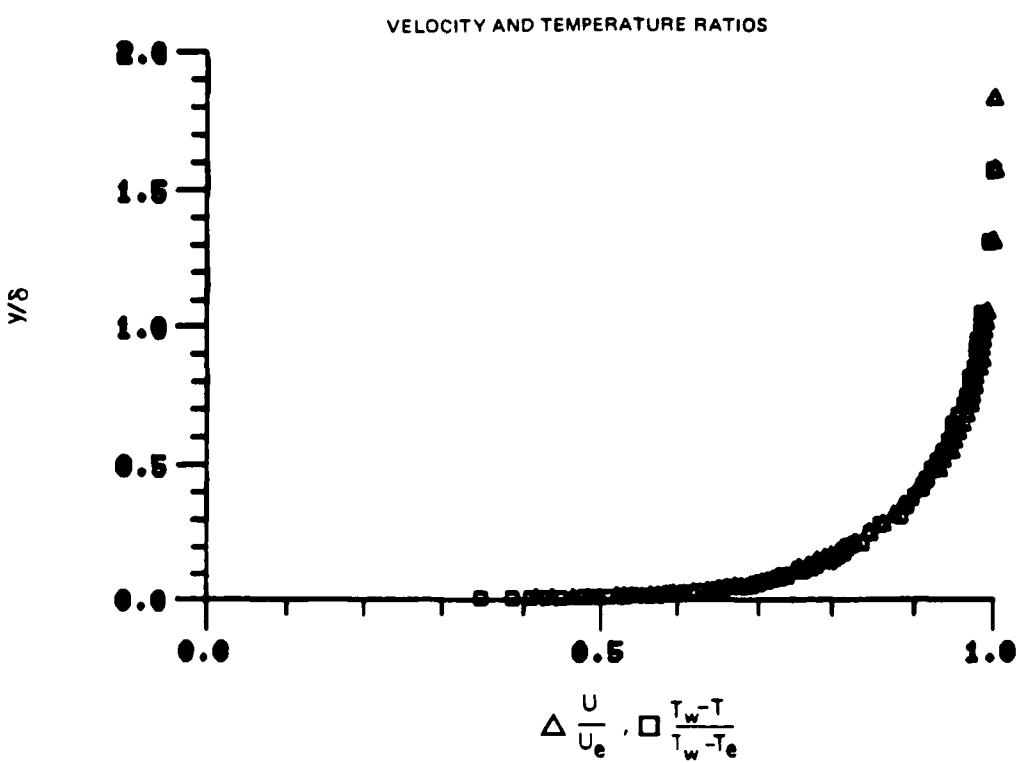


Figure 60. Boundary Layer Velocity and Temperature Profiles
Run No. 6 Point No. 19

78-12-100-1

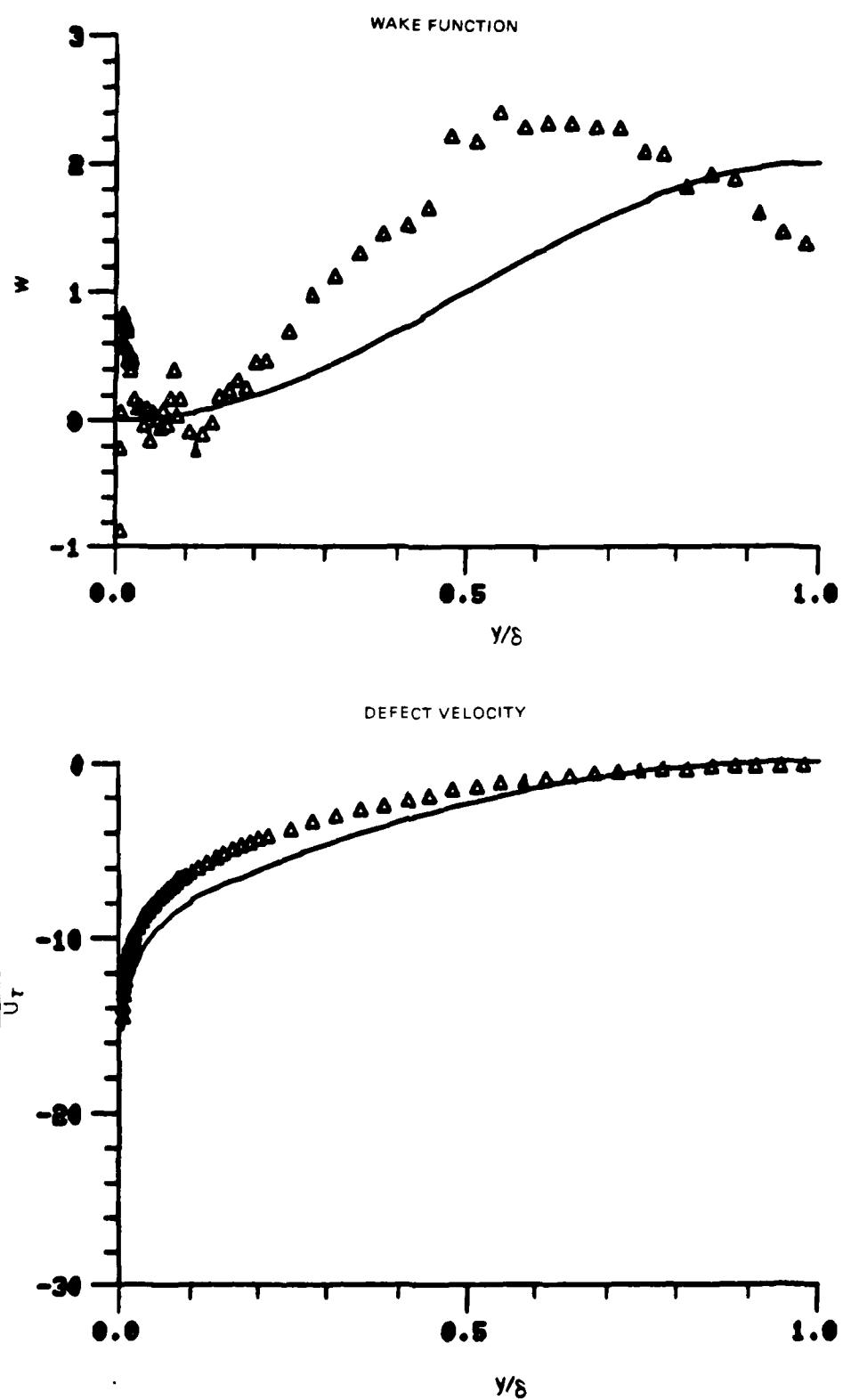


Figure 60. Boundary Layer Velocity Profiles
Run No. 6 Point No. 19

78-12-100-2

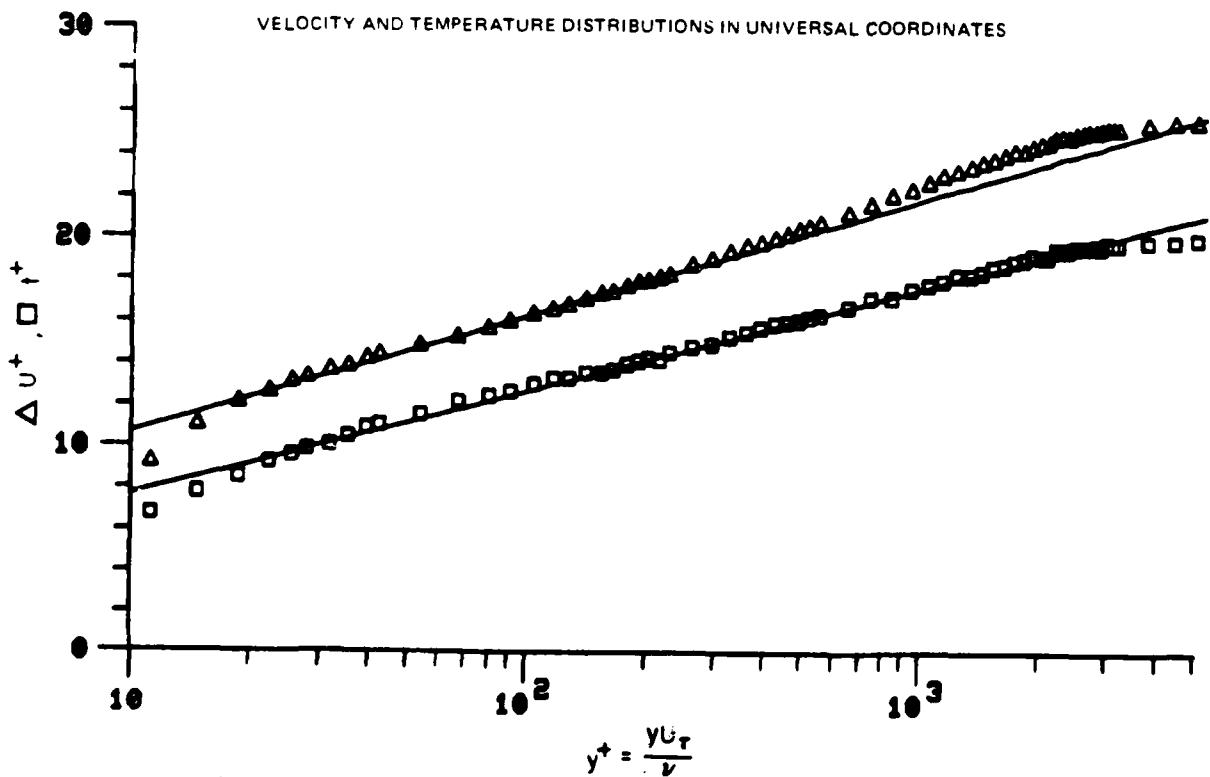
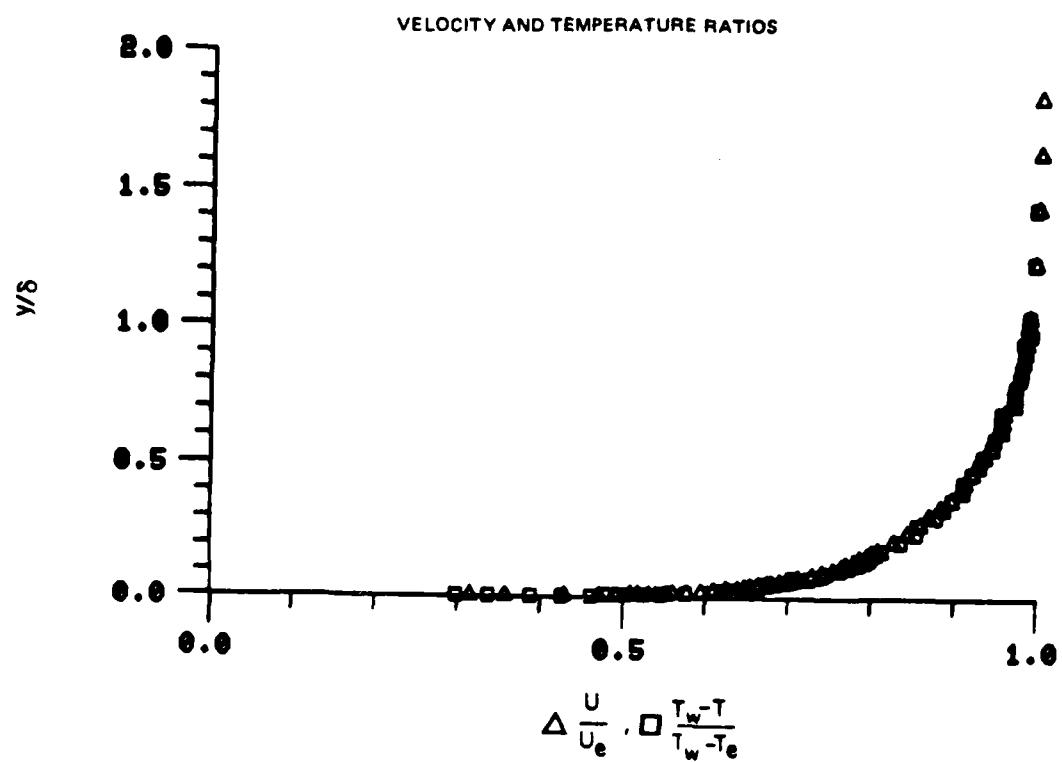


Figure 61. Boundary Layer Velocity and Temperature Profiles

Run No. 10 Point No. 9

78-12-100-1

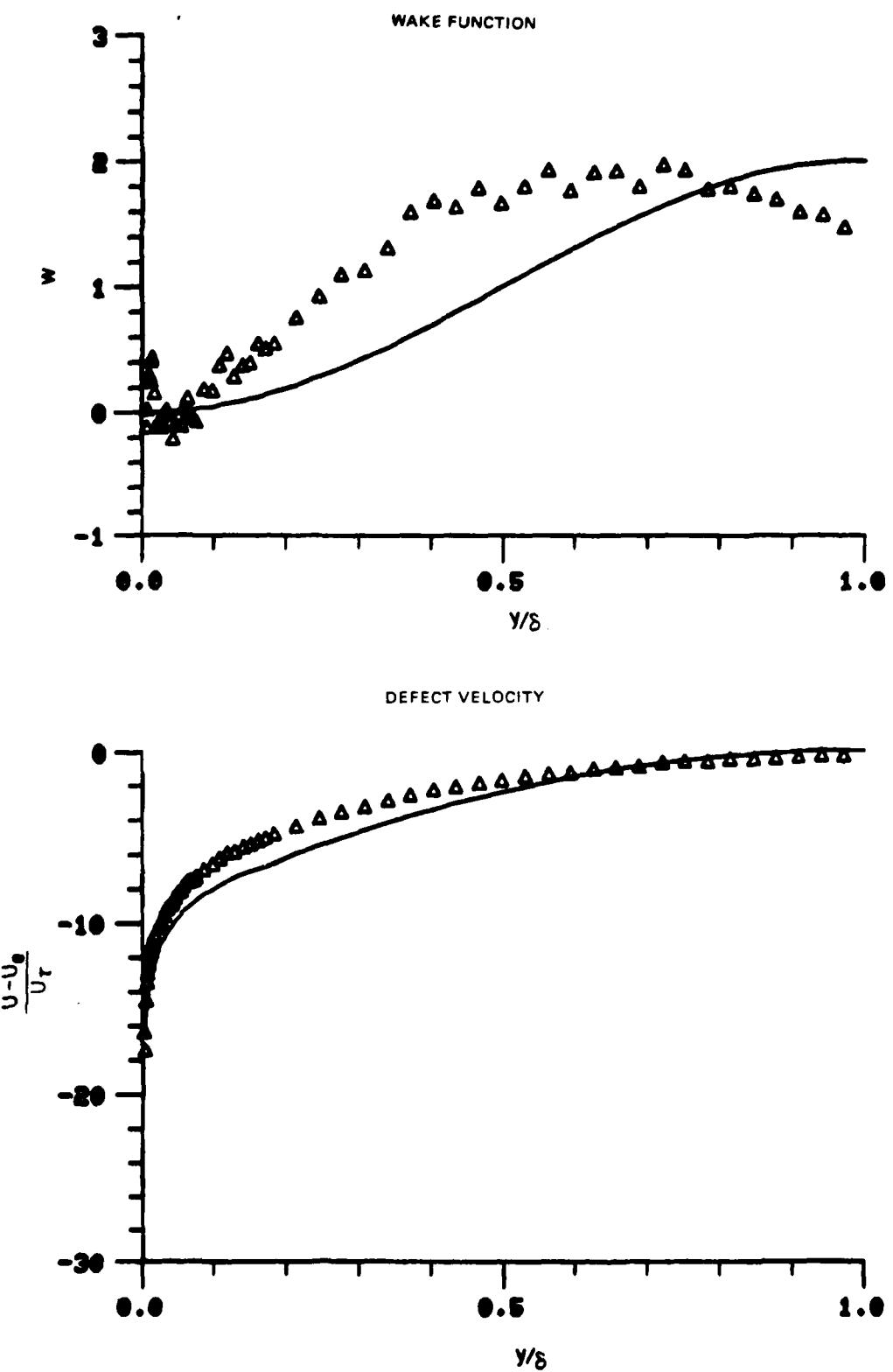


Figure 61. Boundary Layer Velocity Profiles
Run No. 10 Point No. 9

78-12-100-2

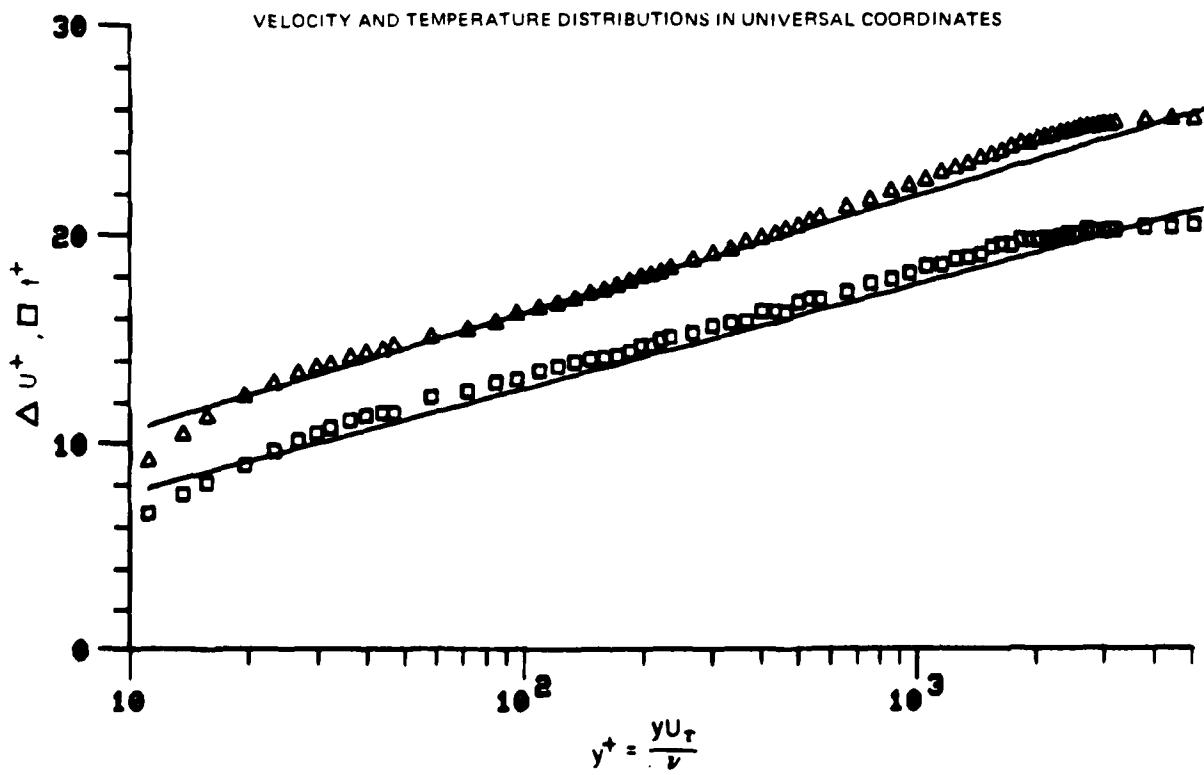
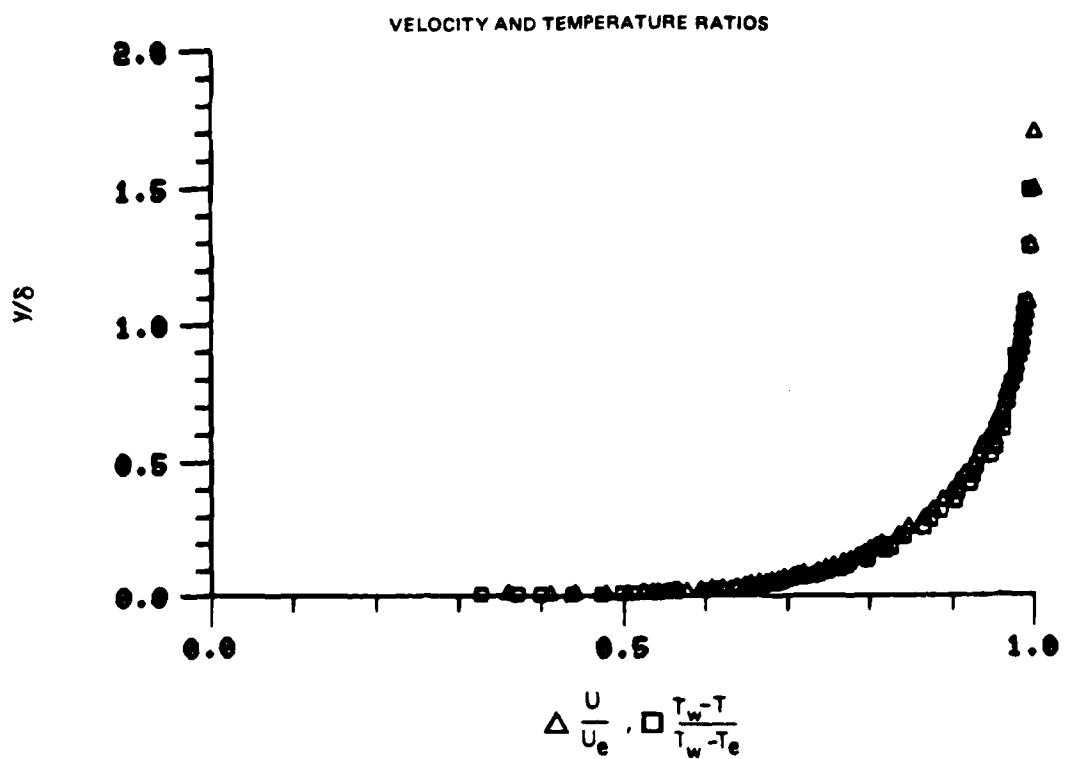


Figure 62. Boundary Layer Velocity and Temperature Profiles
Run No. 10 Point No. 10

78-12-100-1

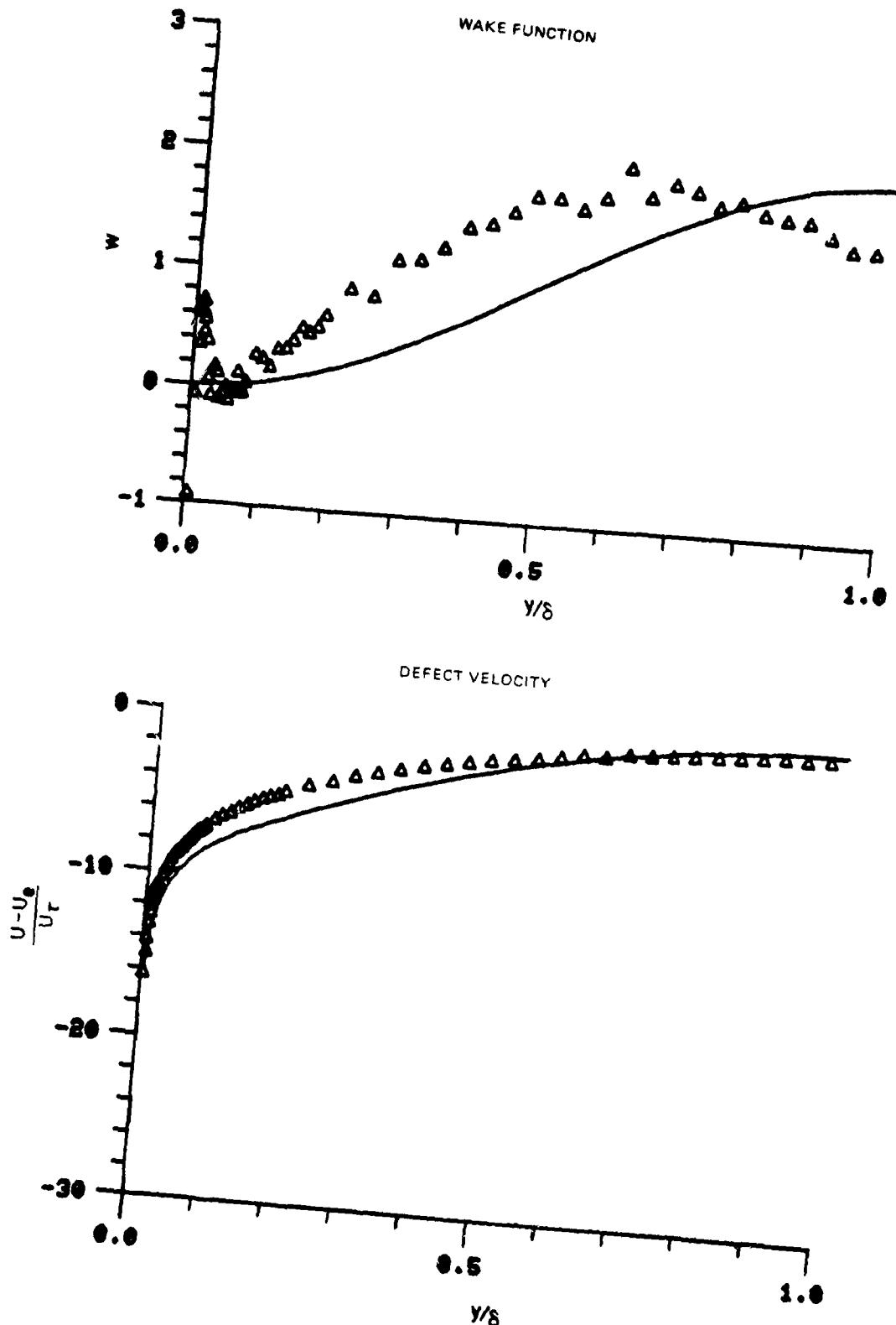


Figure 62. Boundary Layer Velocity Profiles
Run No. 10 Point No. 10

78-12-100-2

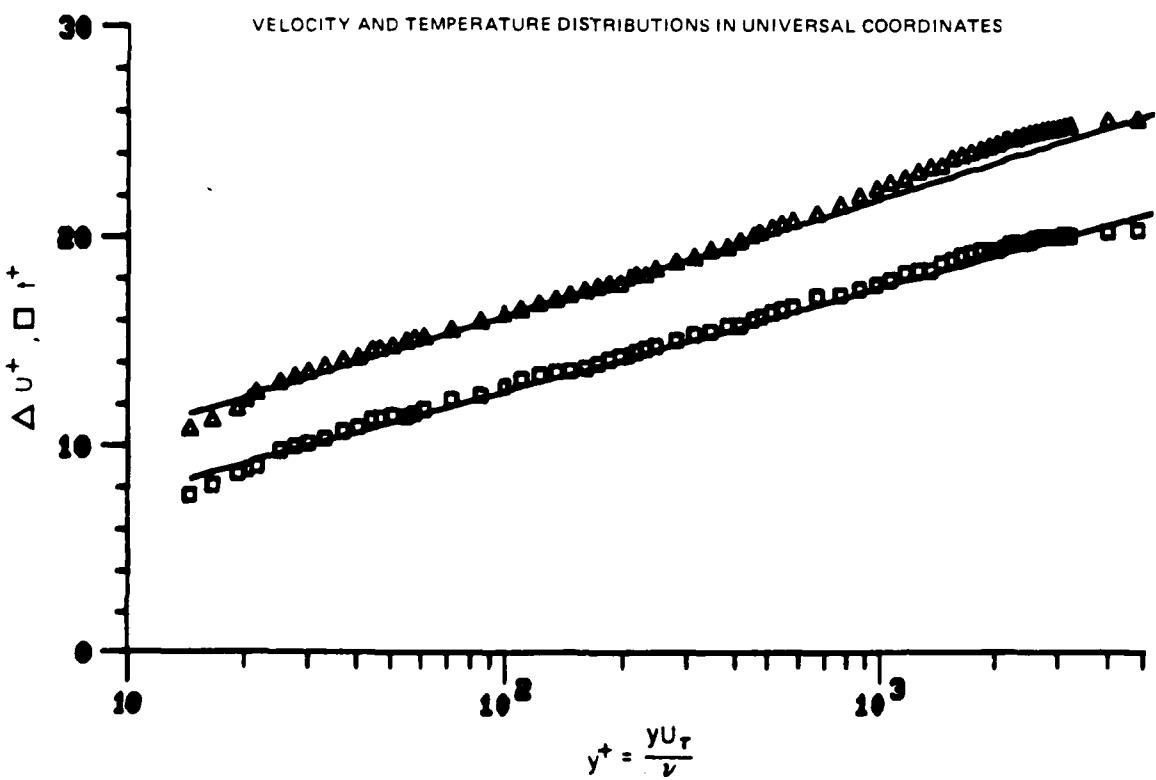
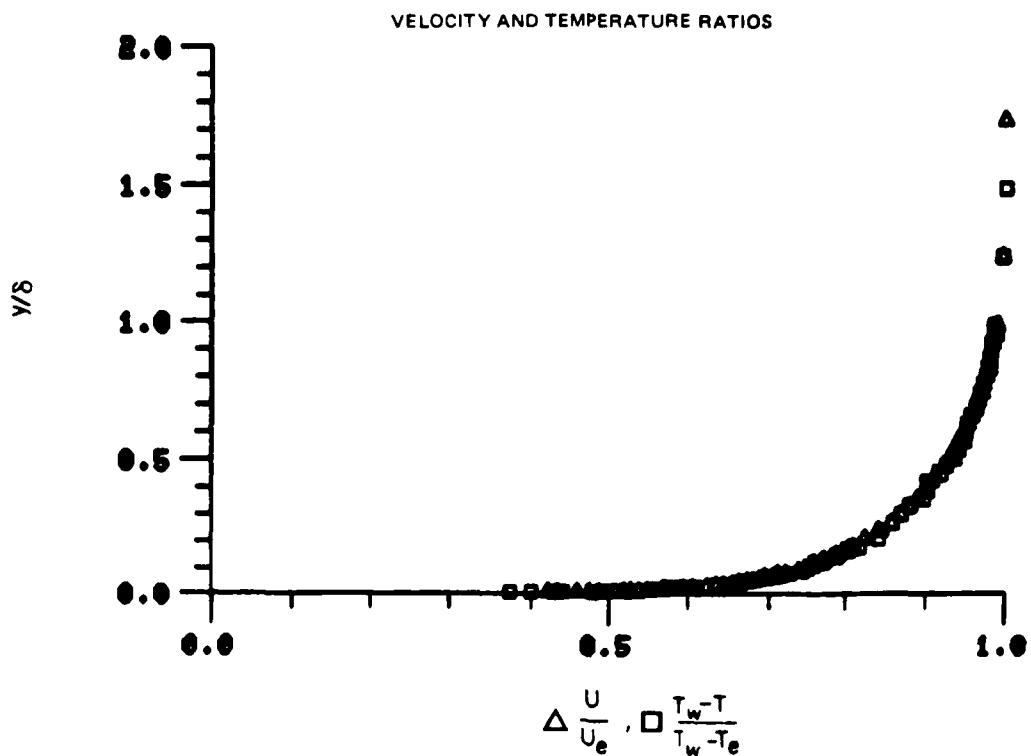


Figure 63. Boundary Layer Velocity and Temperature Profiles
Run No. 6 Point No. 24

78-12-100-1

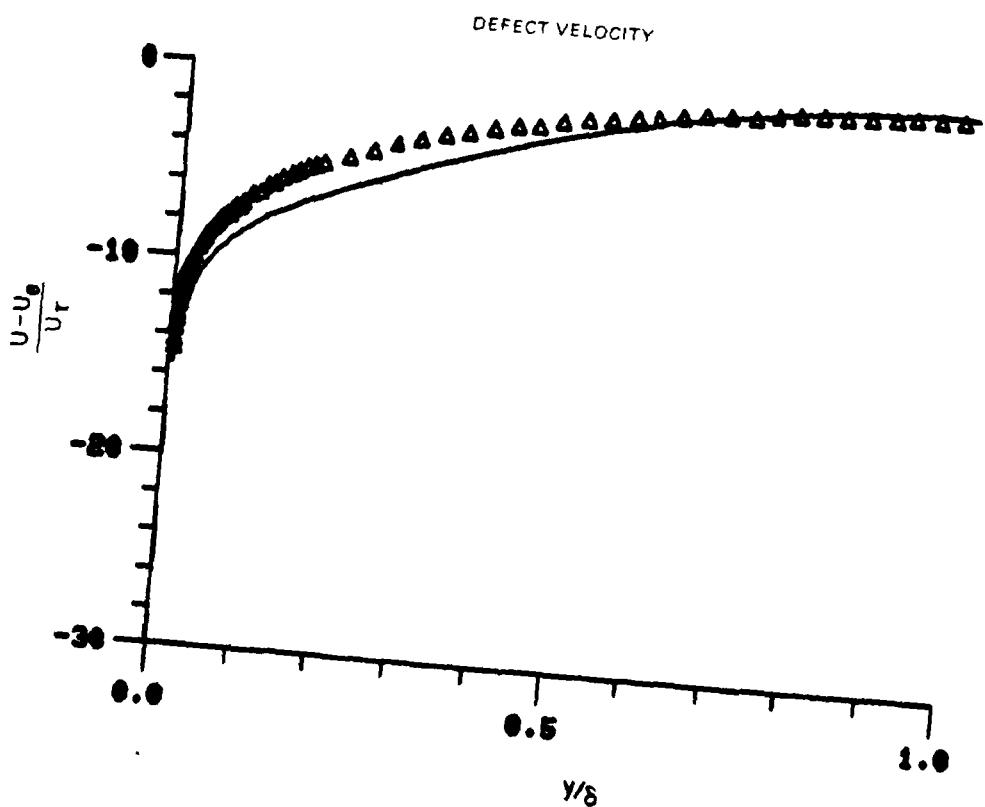
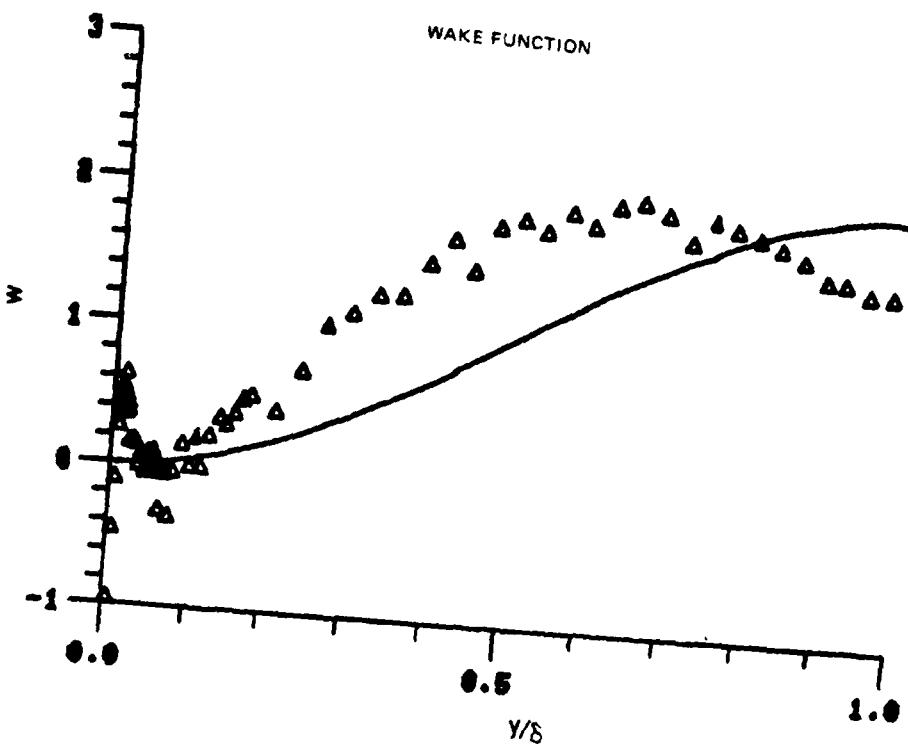


Figure 63. Boundary Layer Velocity Profiles
Run No. 6 Point No. 24

78-12-100-2

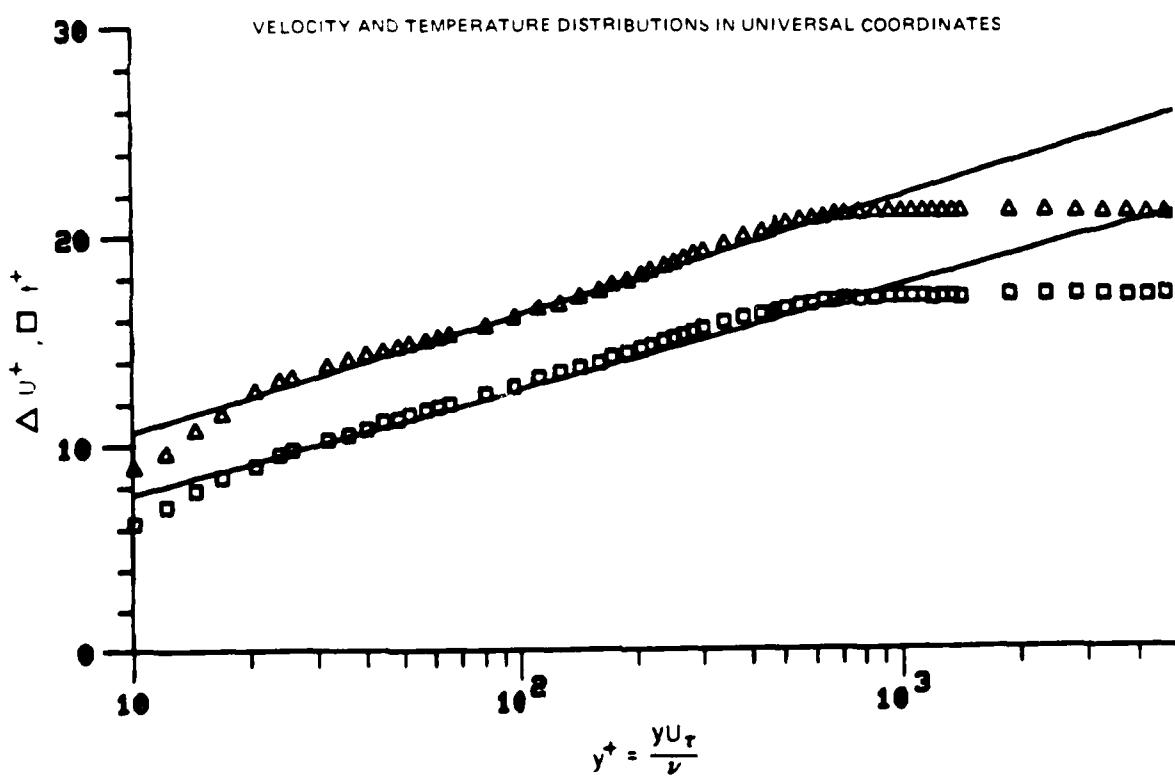
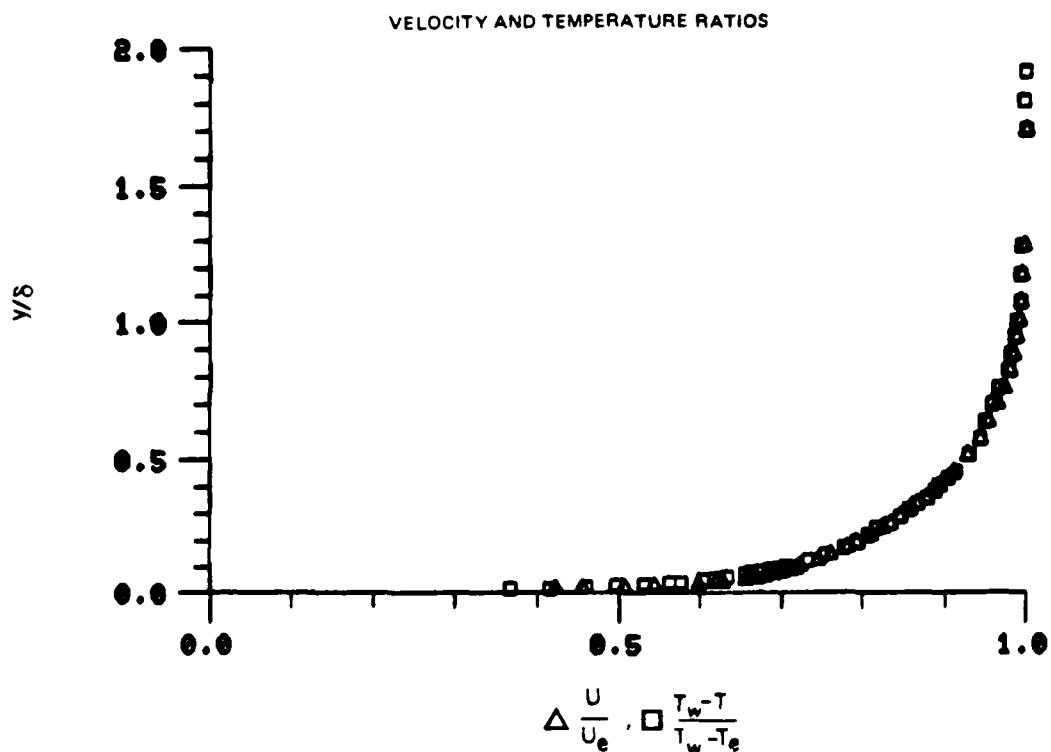


Figure 64. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 3

78-12-100-1

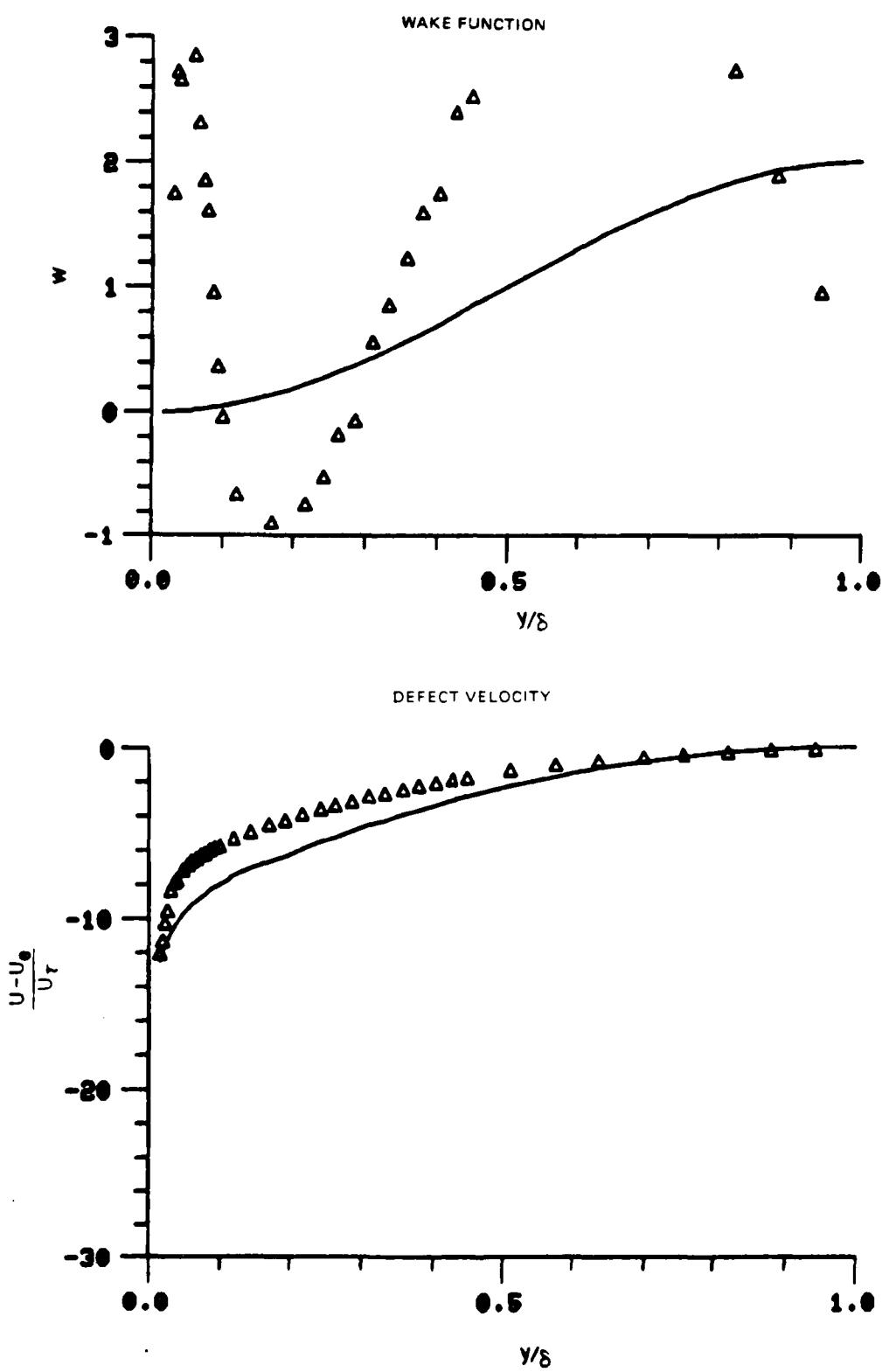


Figure 64. Boundary Layer Velocity Profiles
Run No. 9 Point No. 3

78-12-100-2

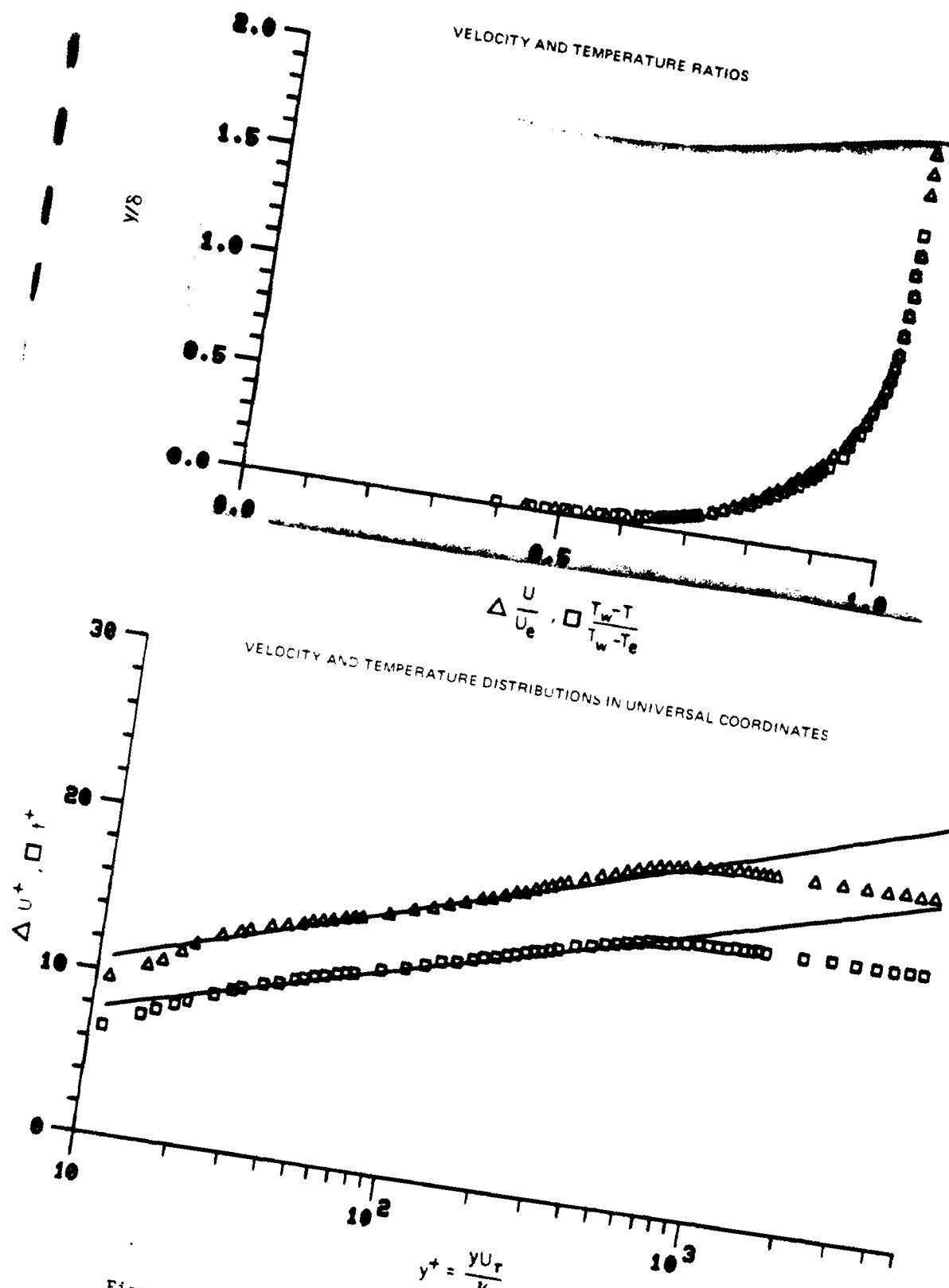


Figure 65. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 4

78-12-100-1

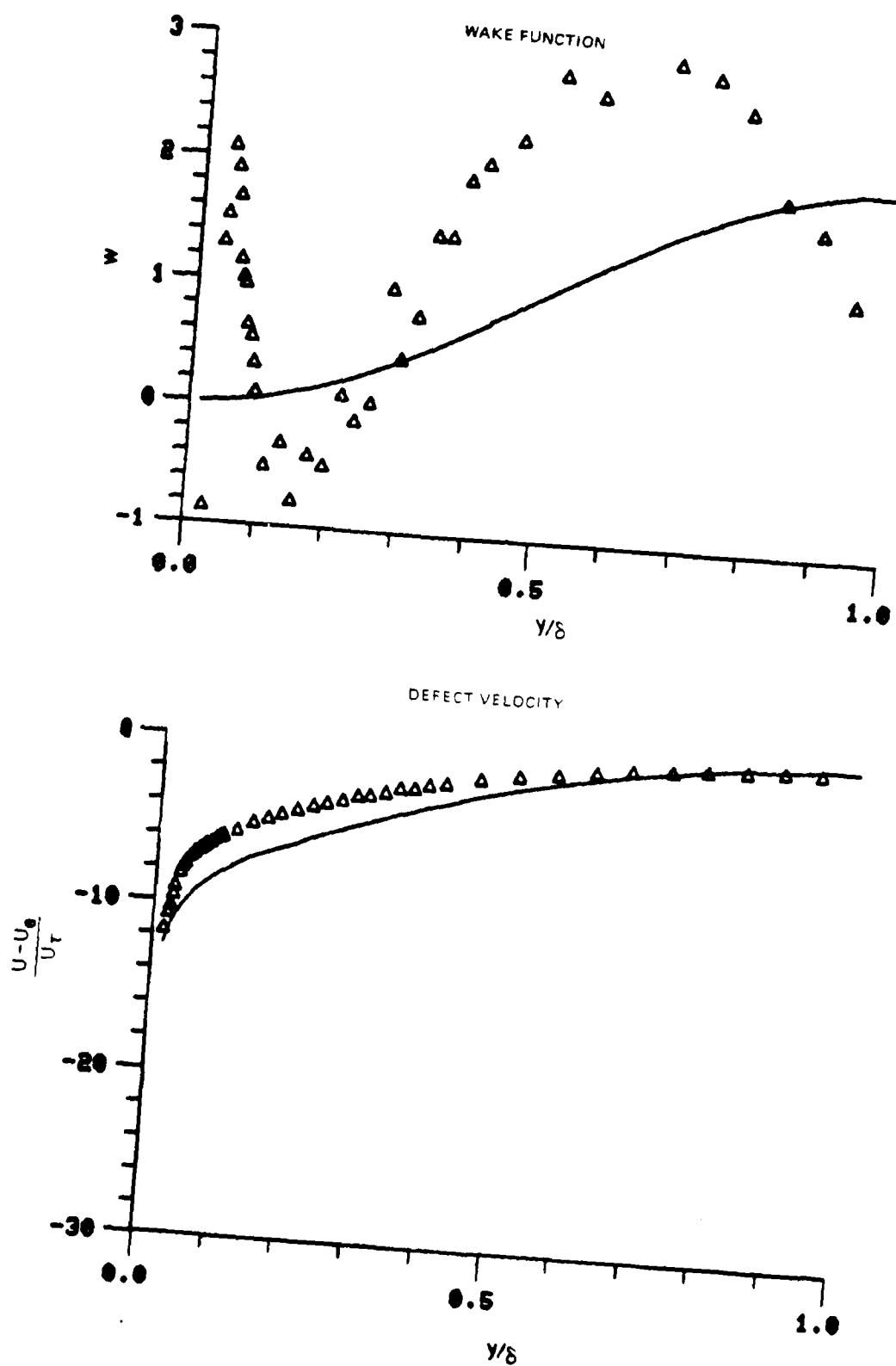


Figure 65. Boundary Layer Velocity Profiles
Run No. 9 Point No. 4

78-12-100-2

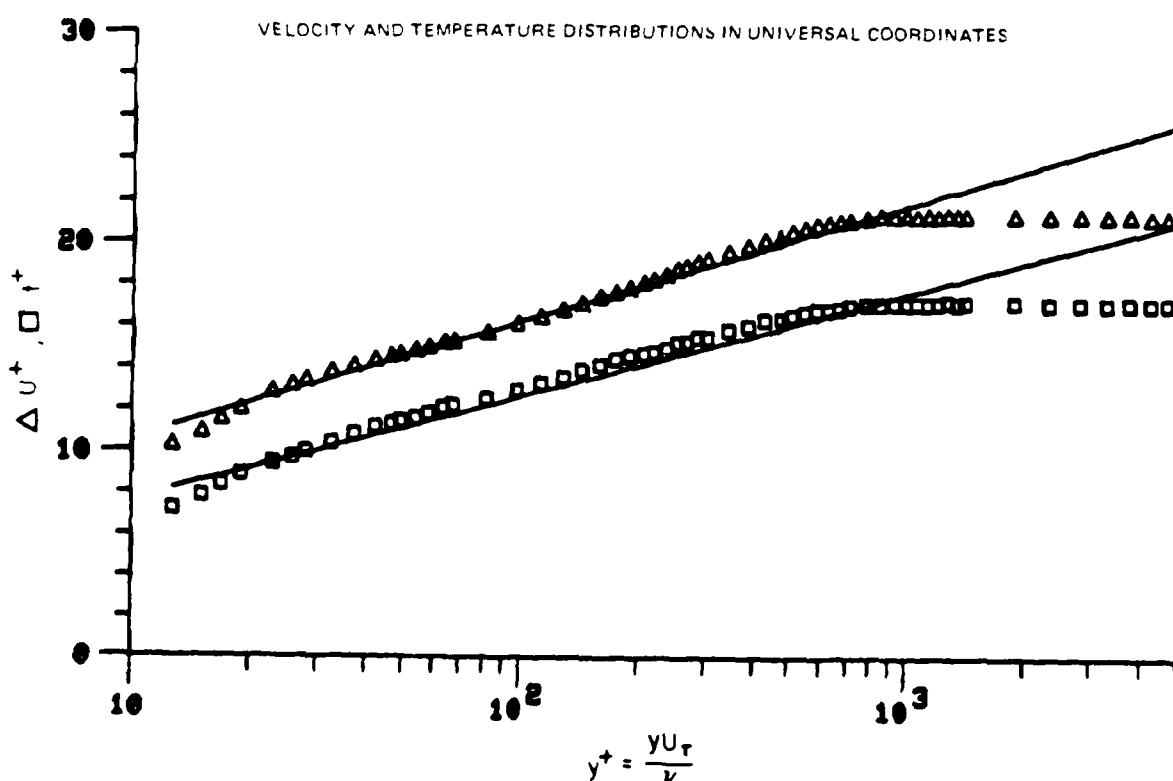
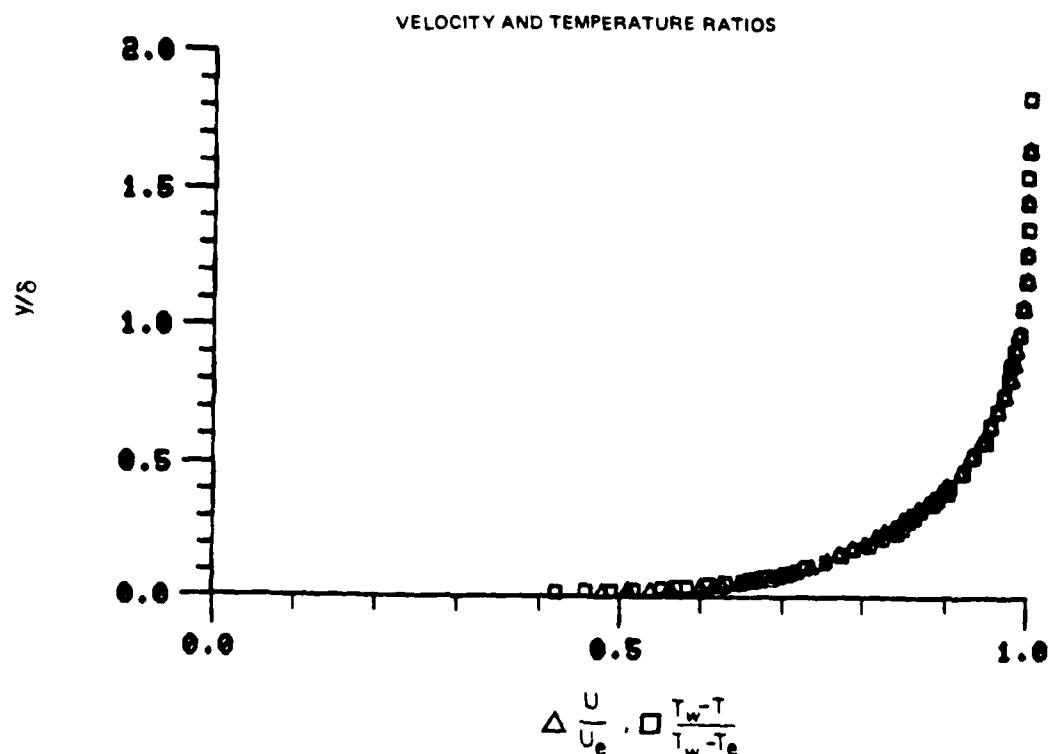


Figure 66. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 5

78-12-100-1

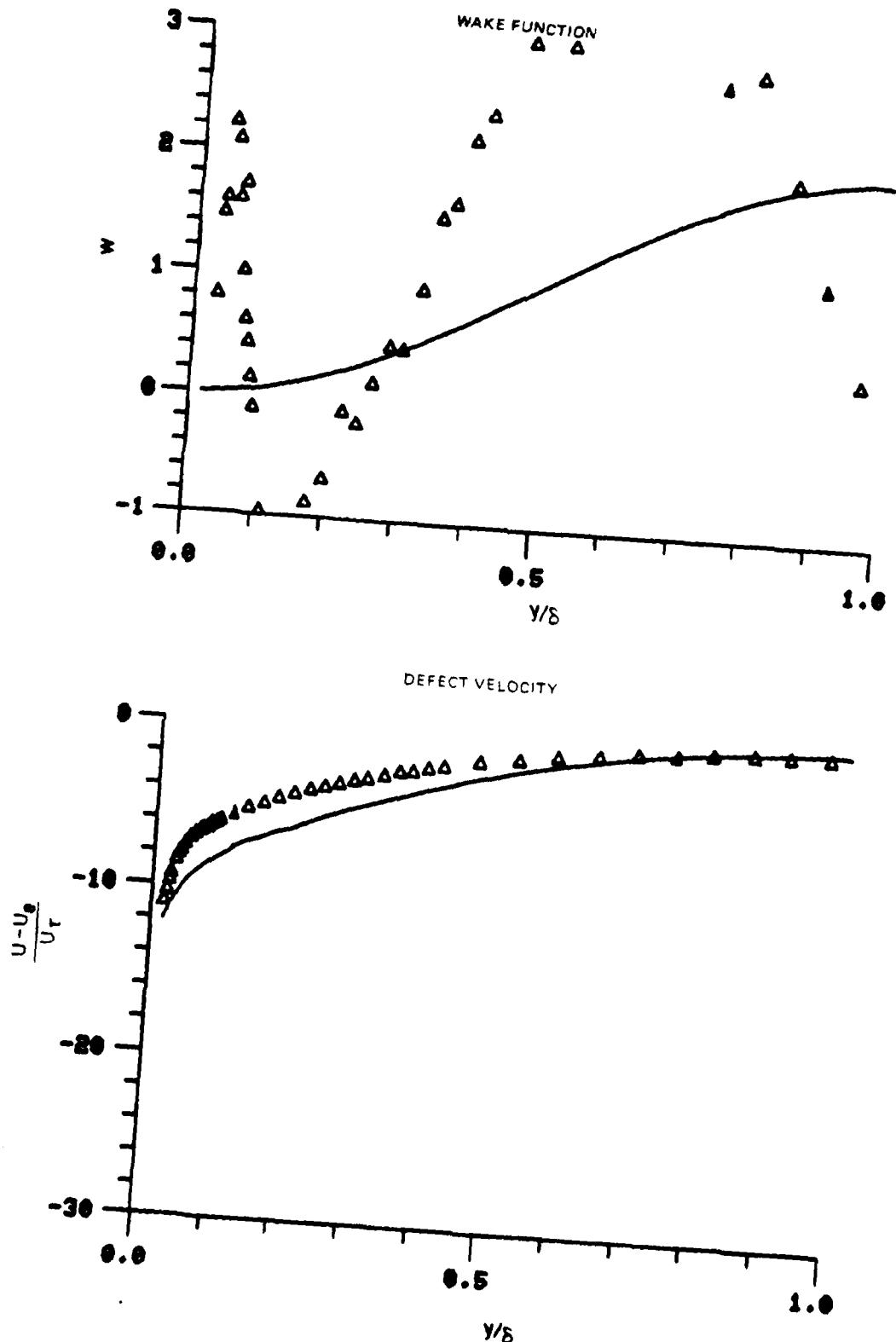


Figure 66. Boundary Layer Velocity Profiles
Run No. 9 Point No. 5

78-12-100-2

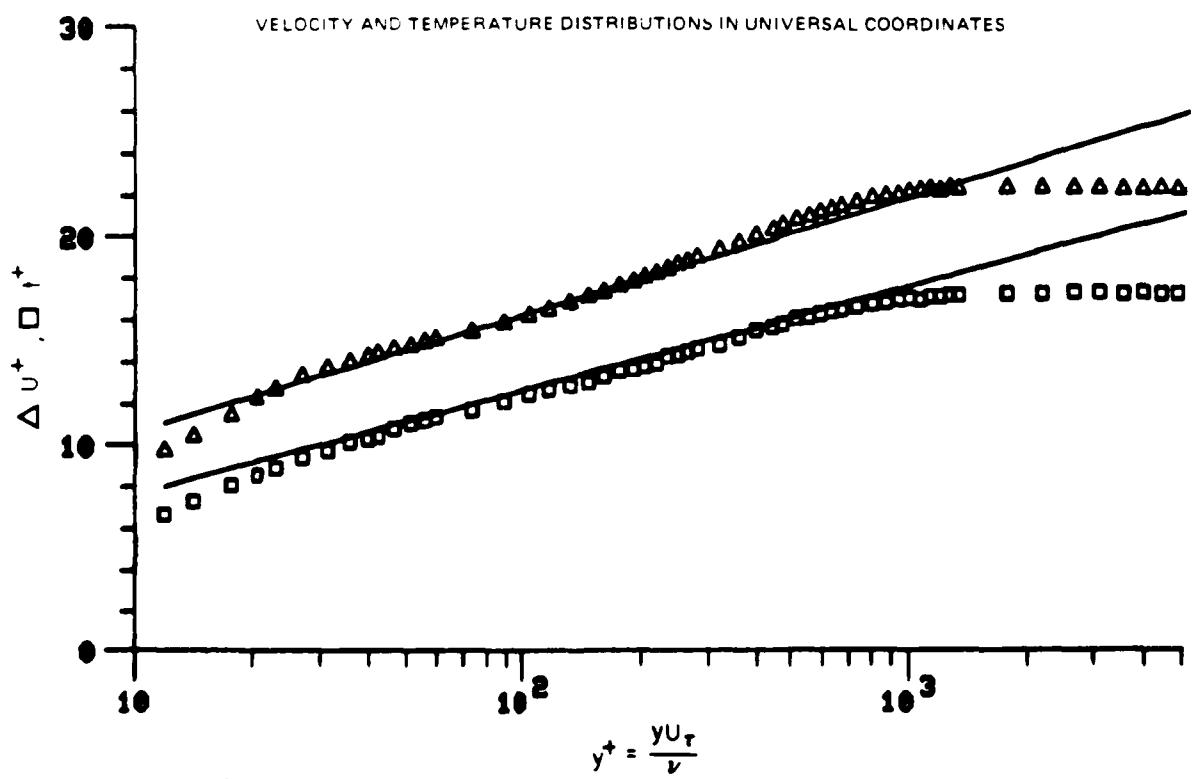
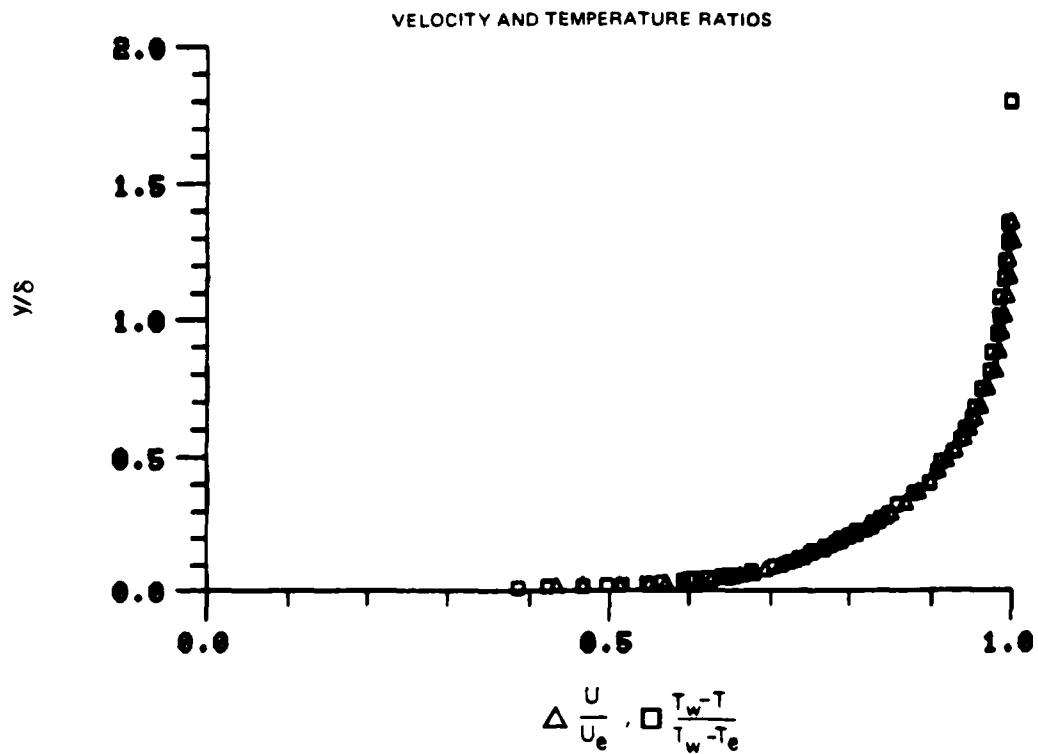


Figure 67. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 6

78-12-100-1

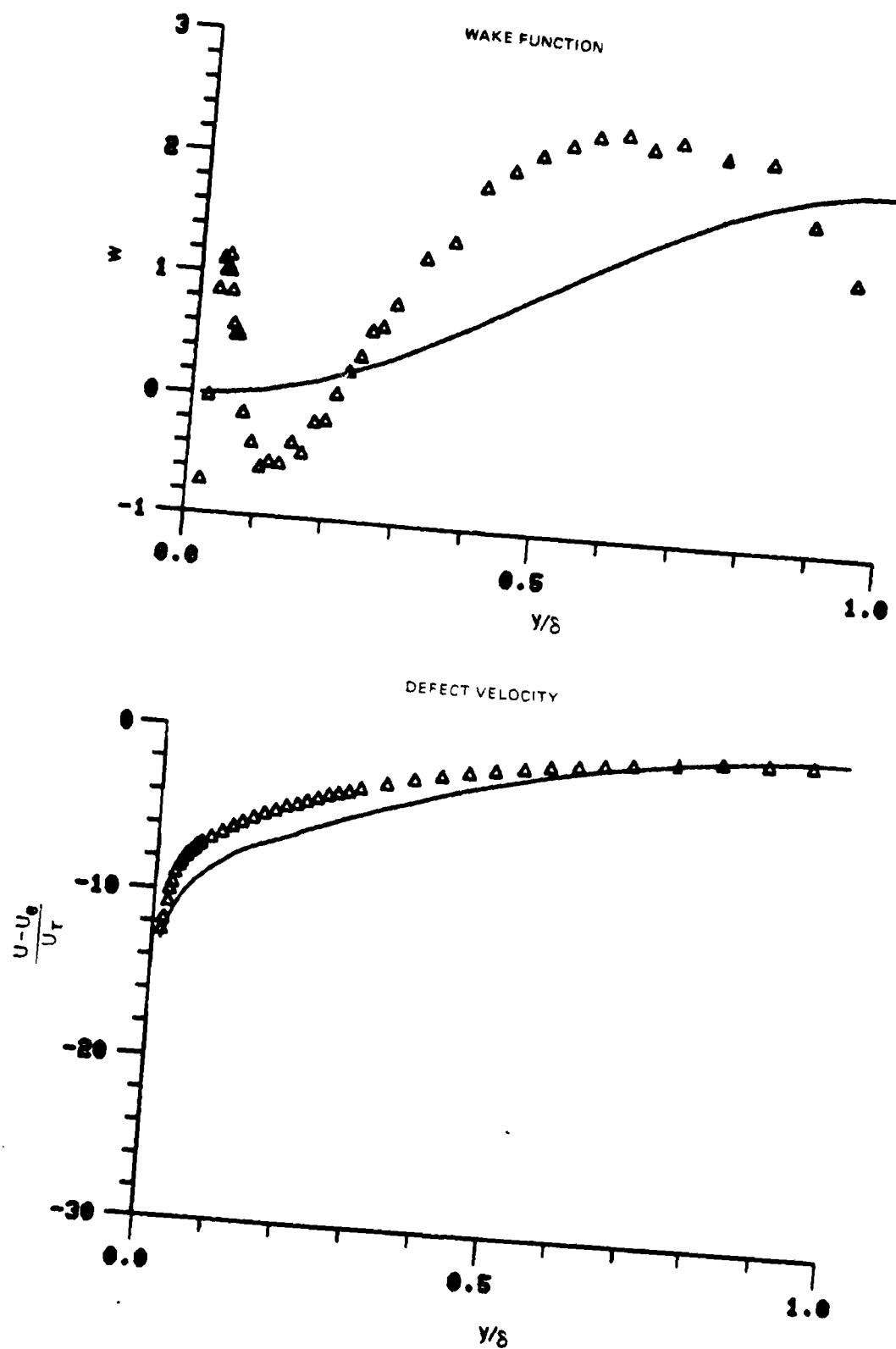


Figure 67. Boundary Layer Velocity Profiles
Run No. 9 Point No. 6

78-12-100-2

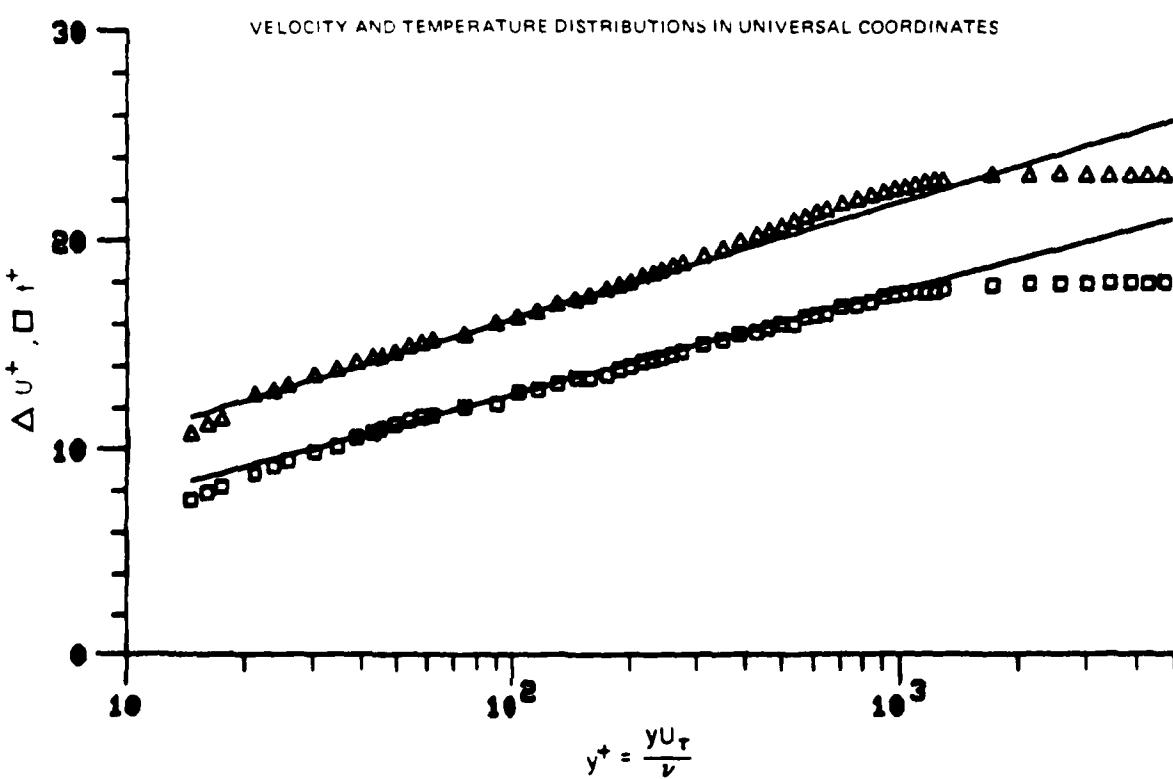
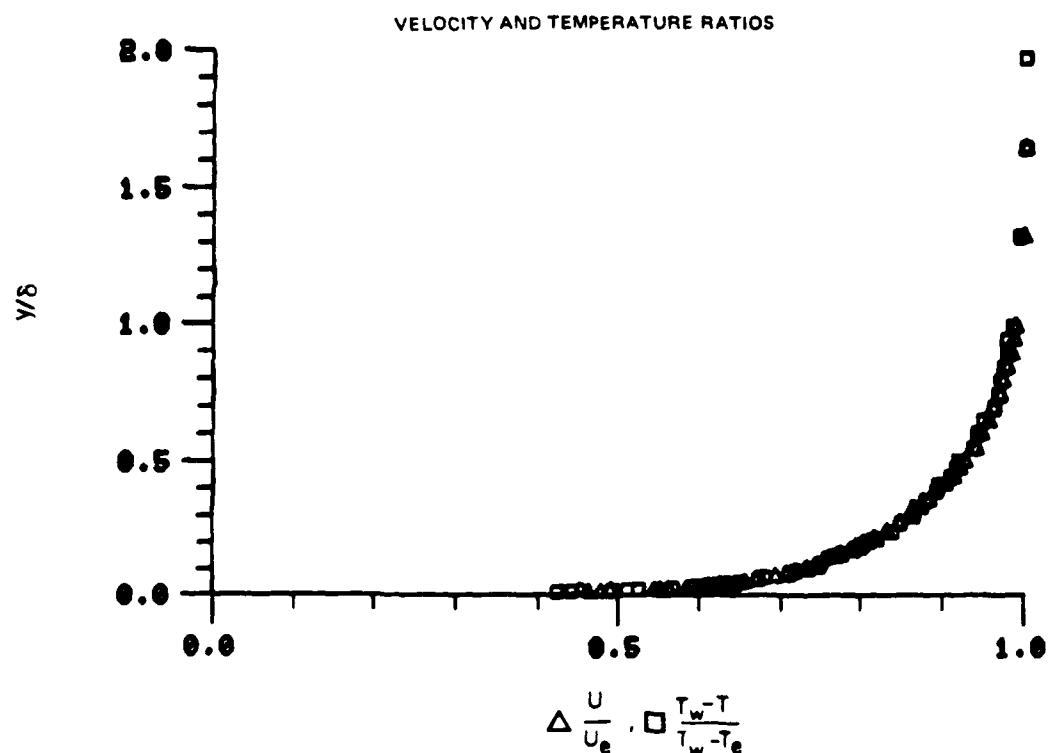


Figure 68. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 7

78-12-100-1

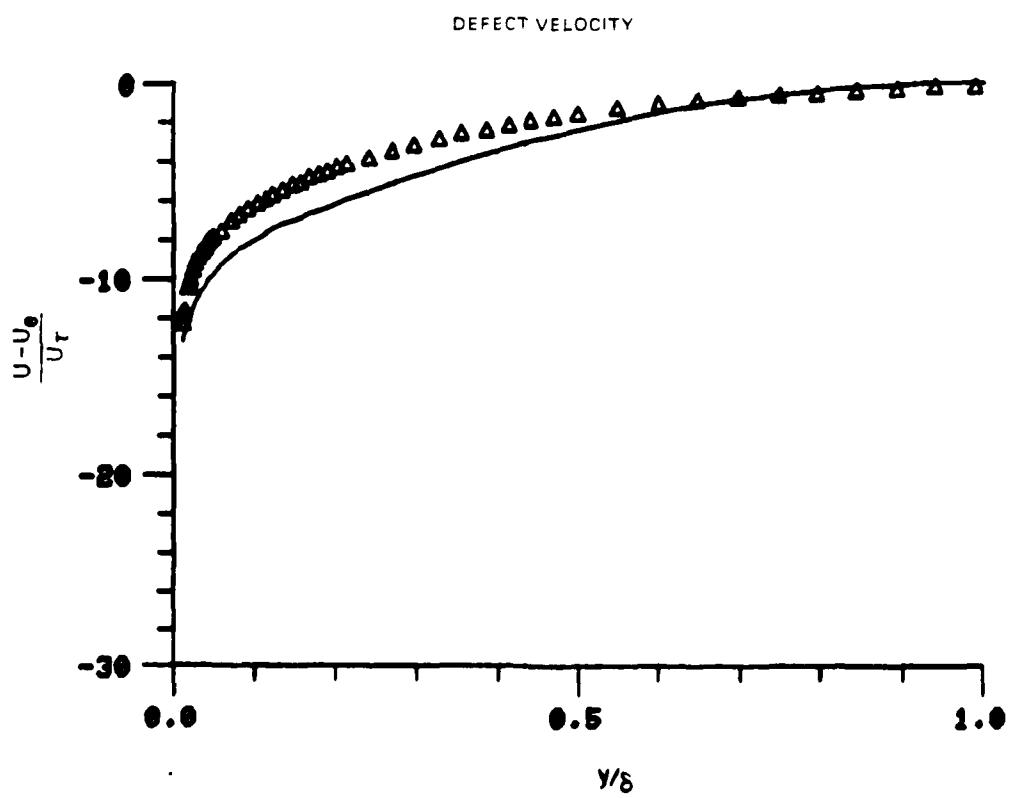
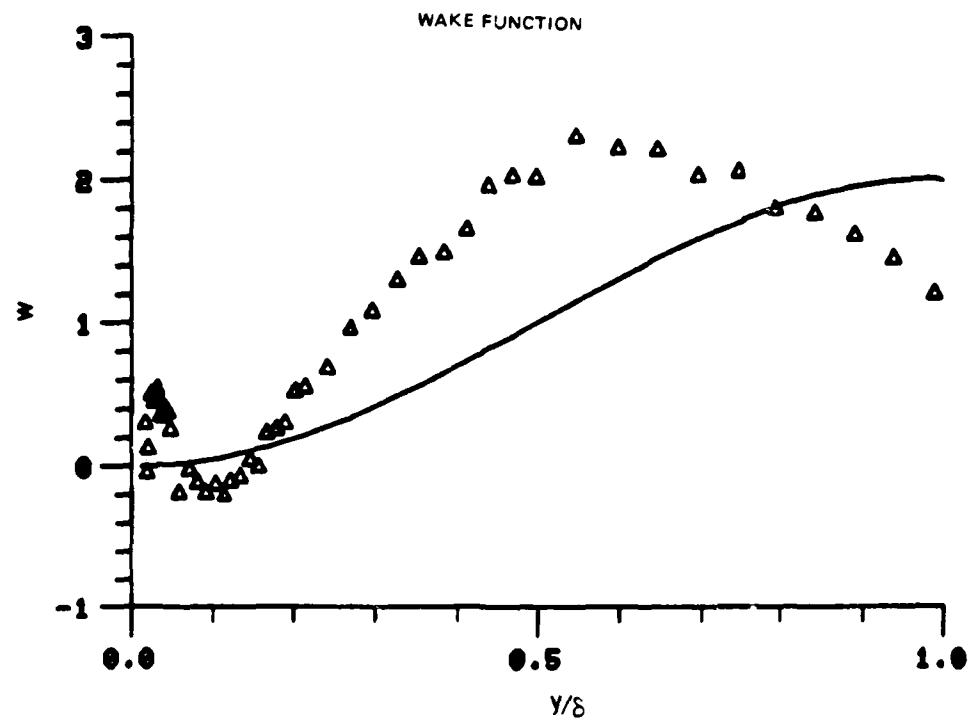
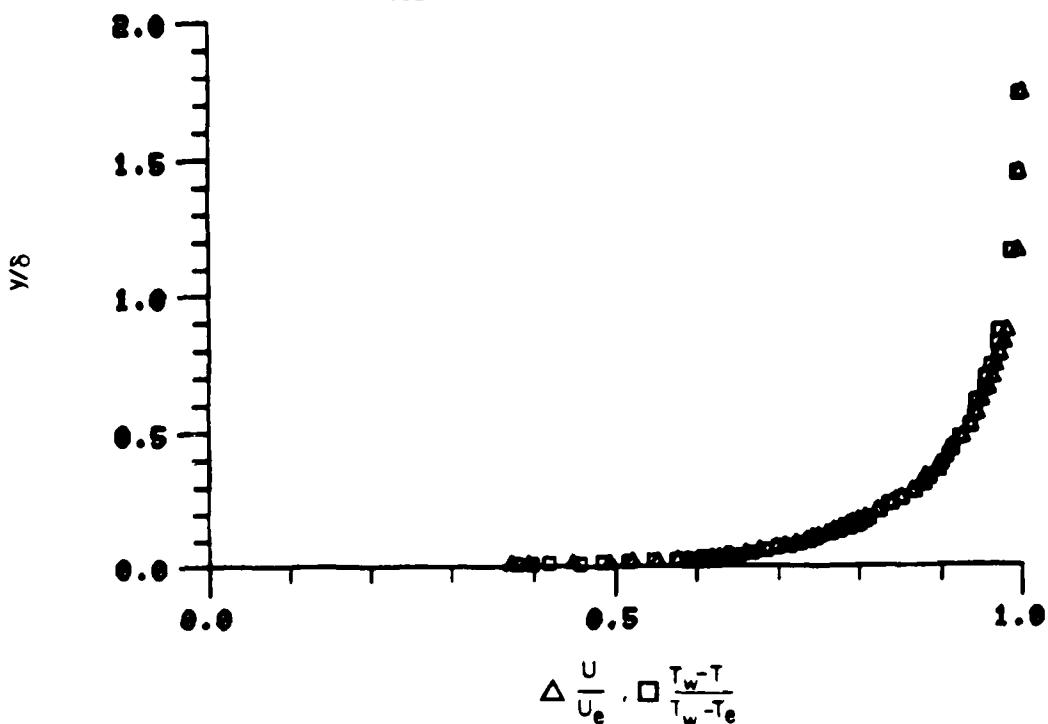


Figure 68. Boundary Layer Velocity Profiles
Run No. 9 Point No. 7

78-12-100-2

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VELOCITY AND TEMPERATURE DISTRIBUTIONS IN UNIVERSAL COORDINATES

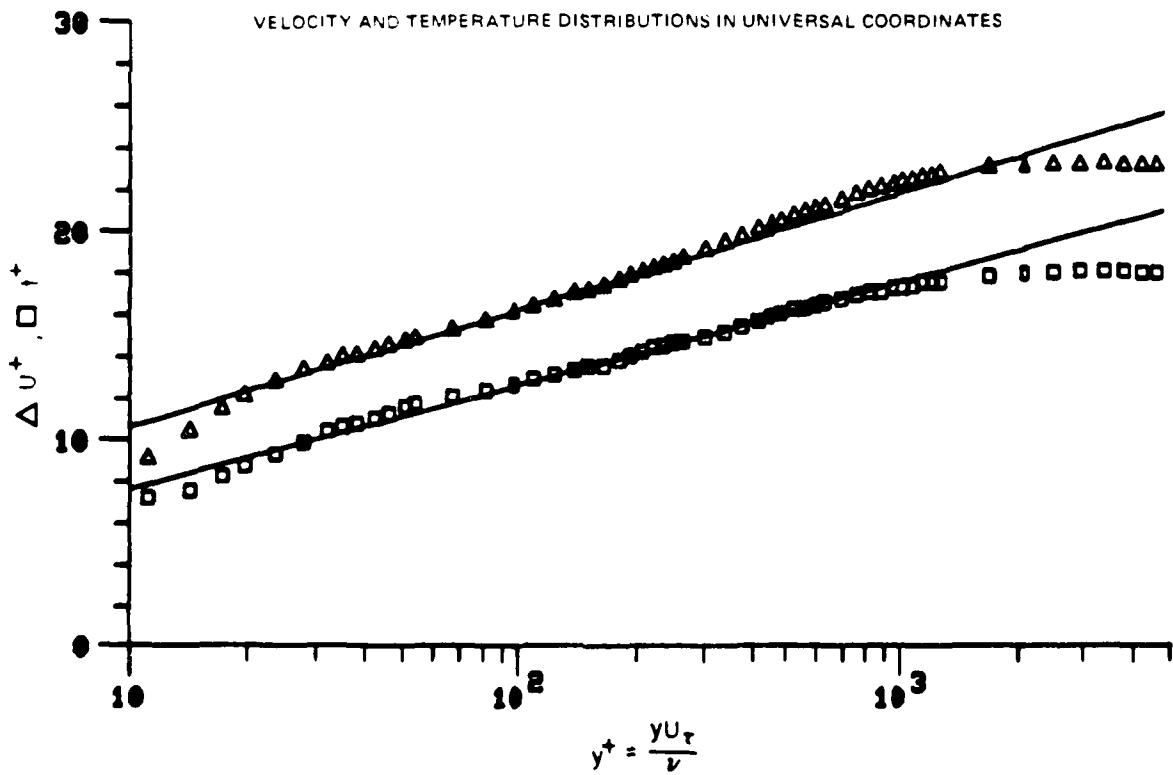


Figure 69. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 8

78-12-100-1

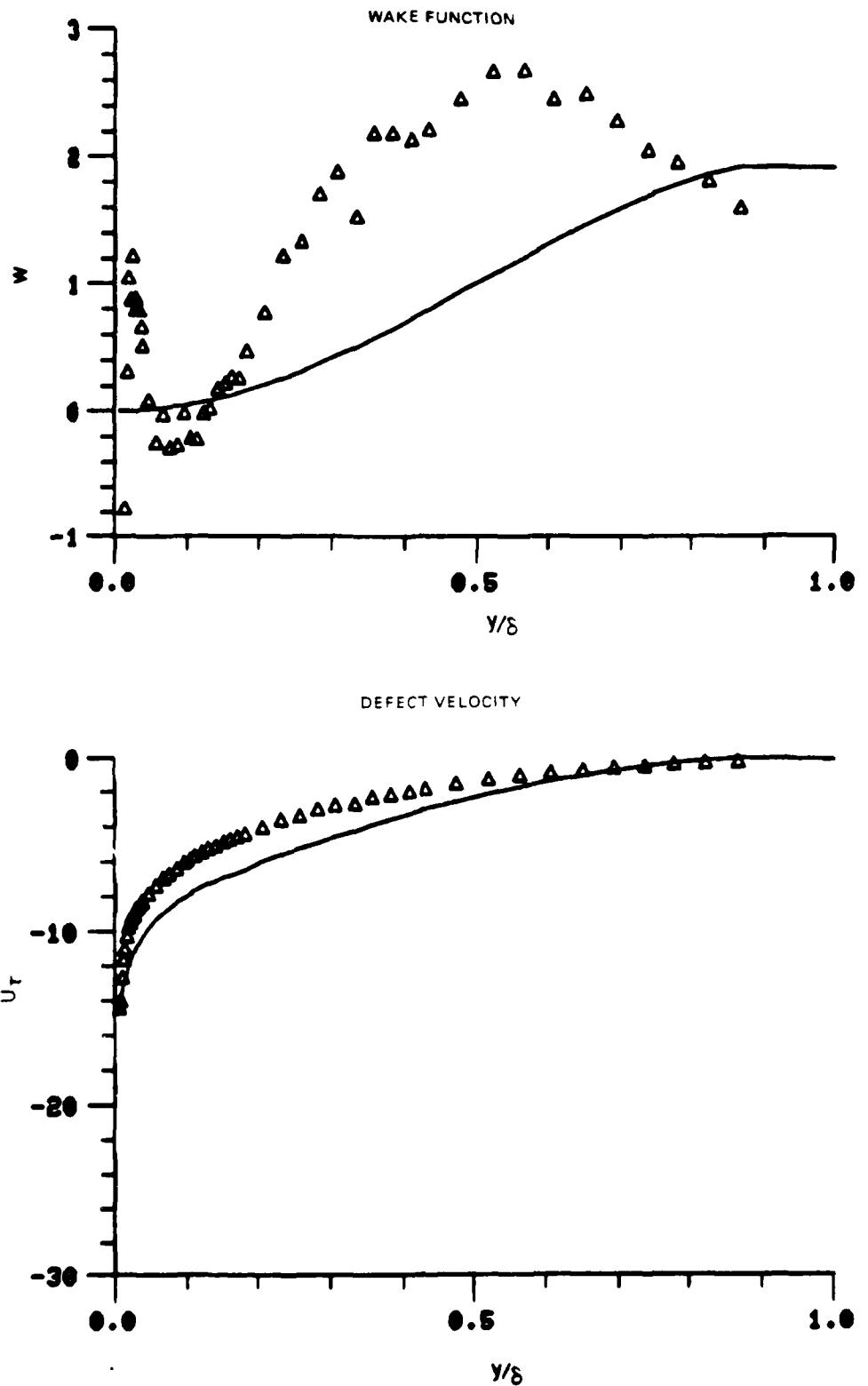


Figure 69. Boundary Layer Velocity Profiles
Run No. 9 Point No. 8

78-12-100-2

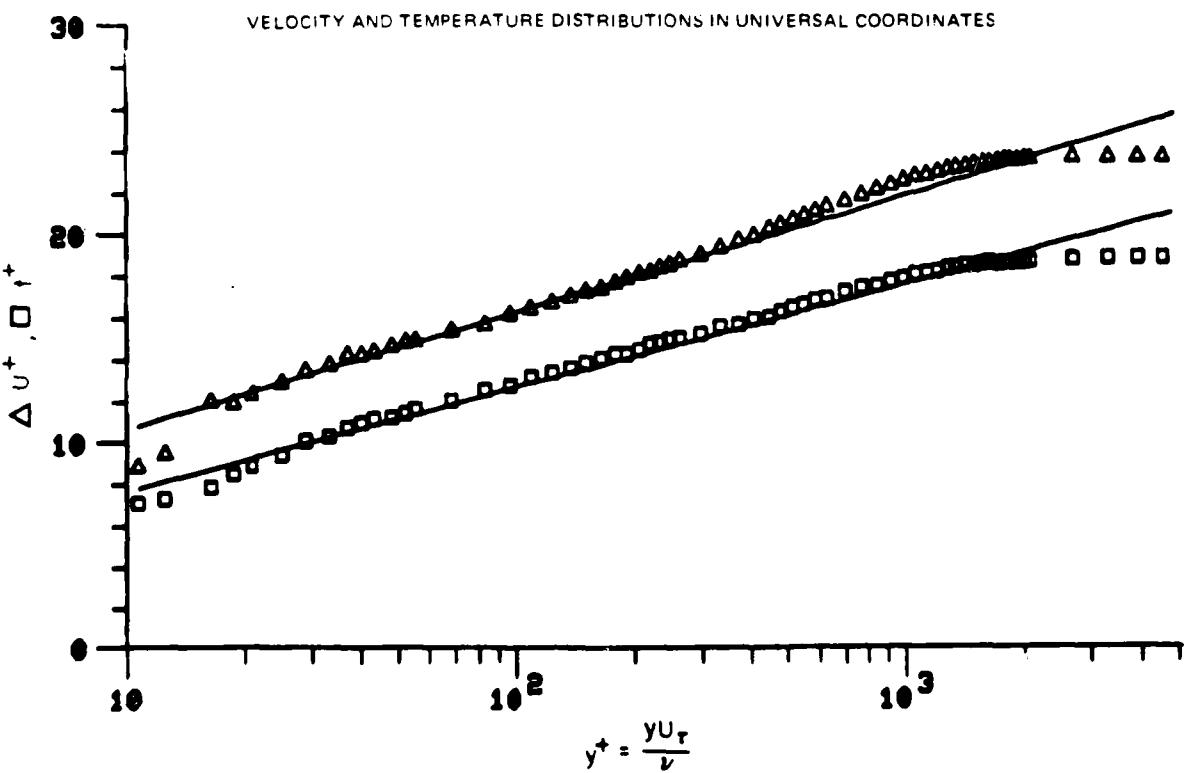
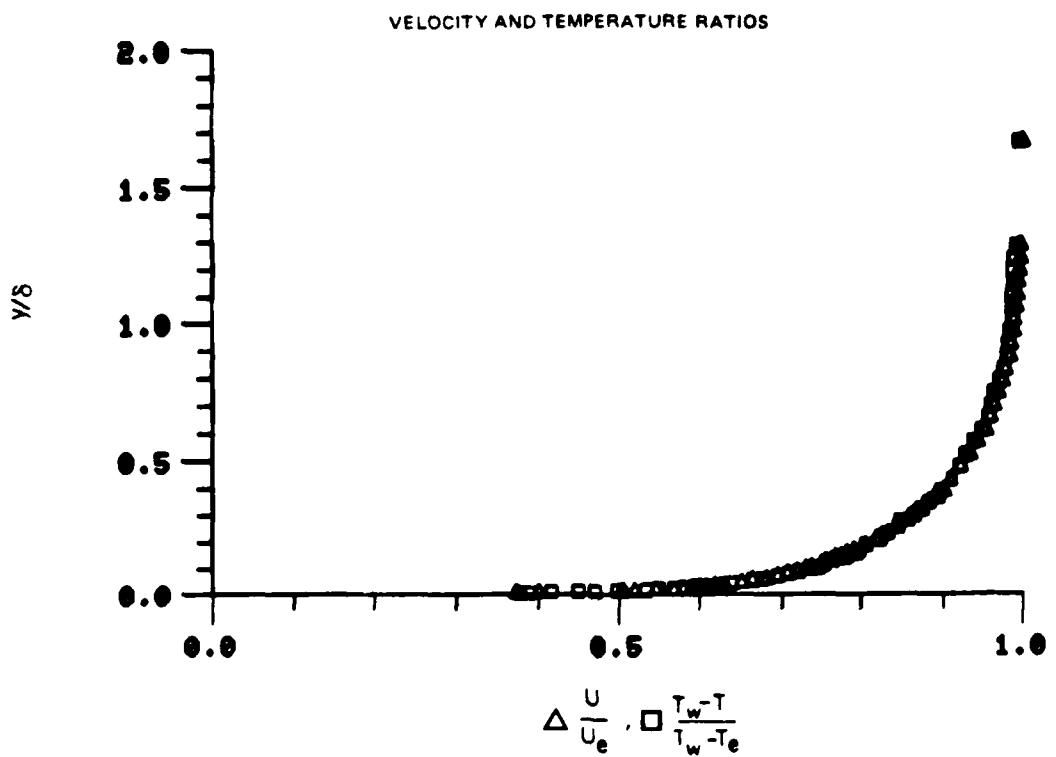


Figure 70. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 10 78-12-100-1

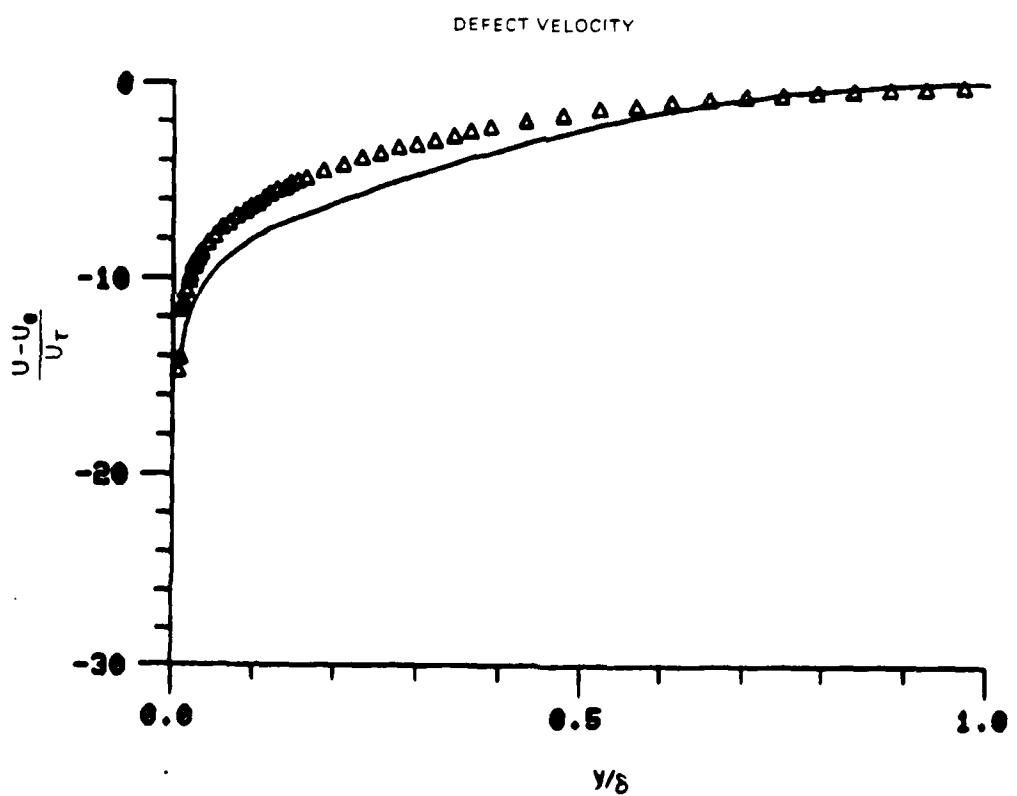
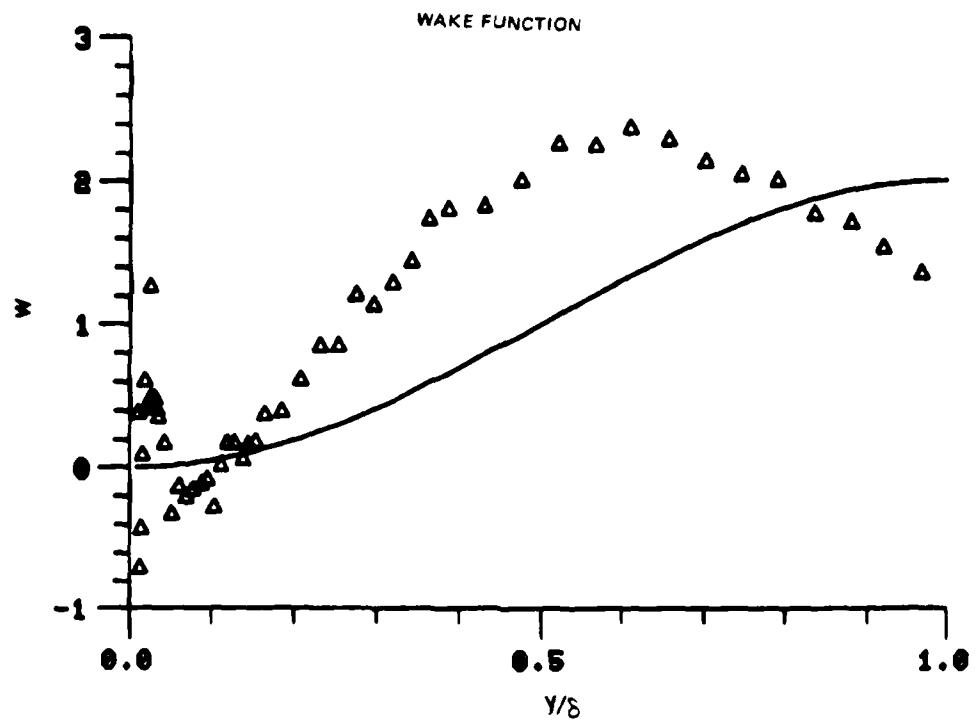


Figure 70. Boundary Layer Velocity Profiles
Run No. 9 Point No. 10

78-12-100-2

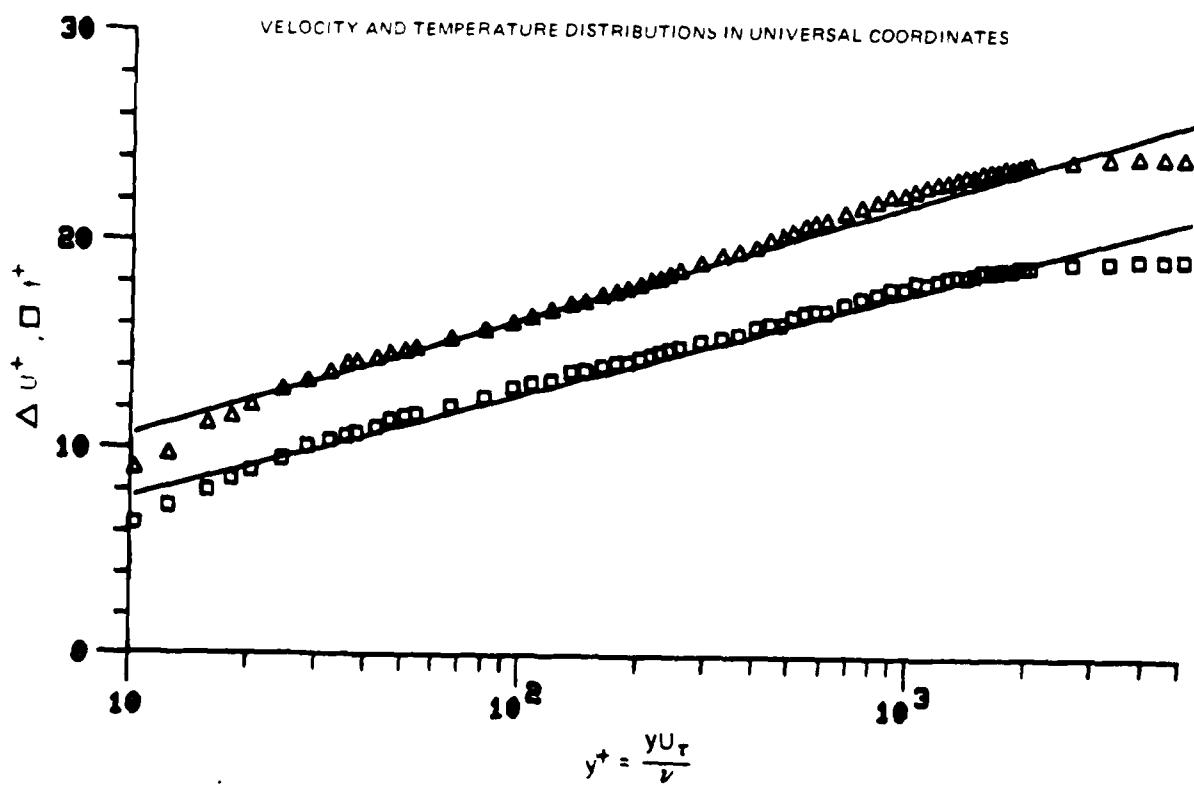
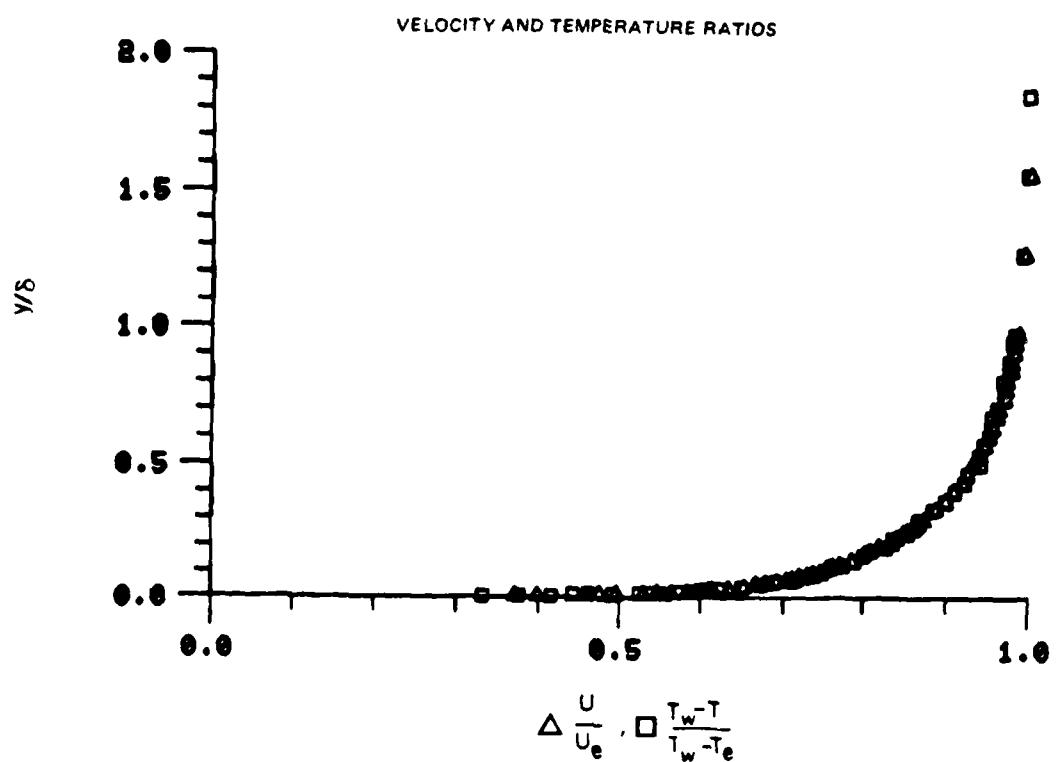


Figure 71. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 12

78-12-100-1

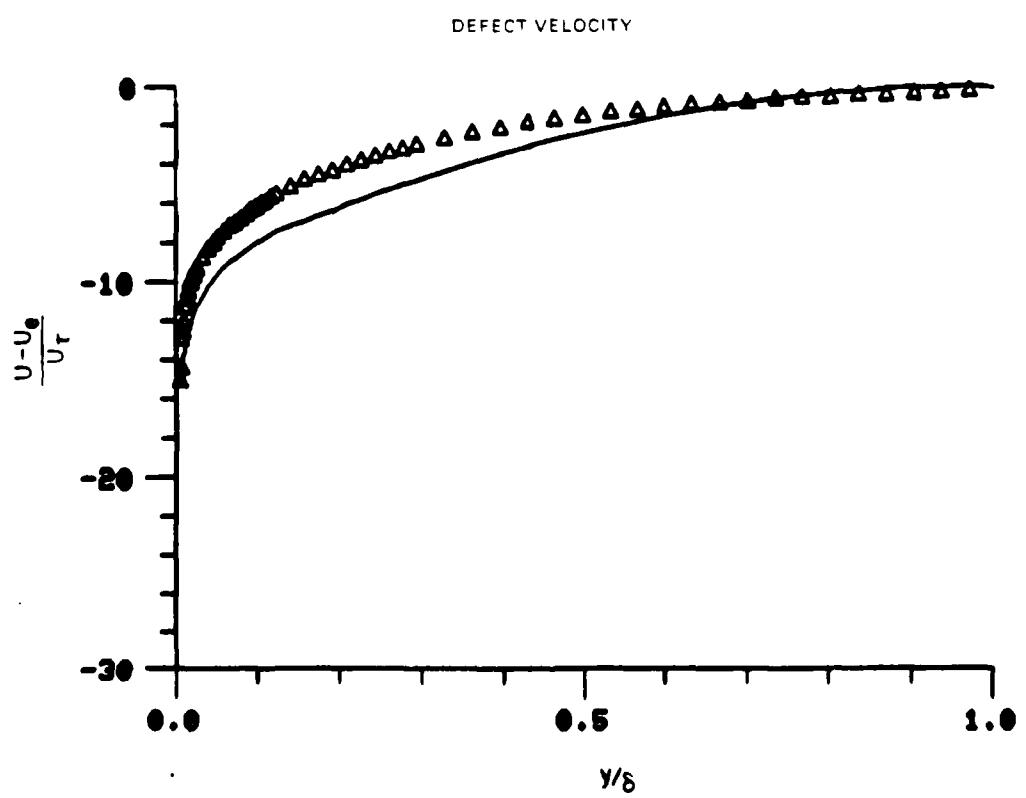
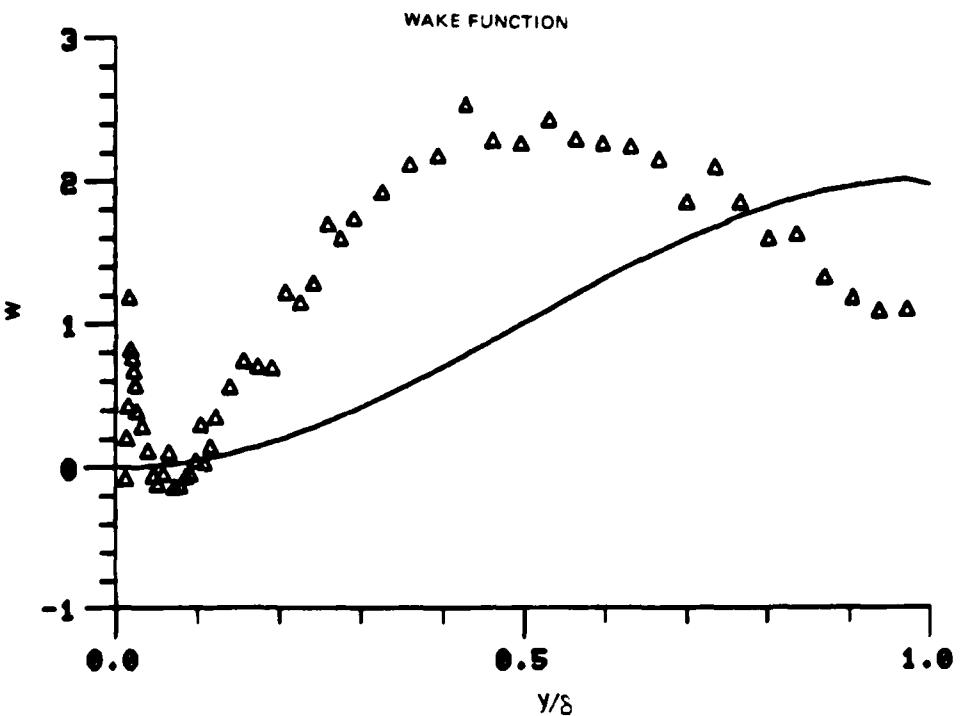


Figure 71. Boundary Layer Velocity Profiles
Run No. 9 Point No. 12

7-12-100-2

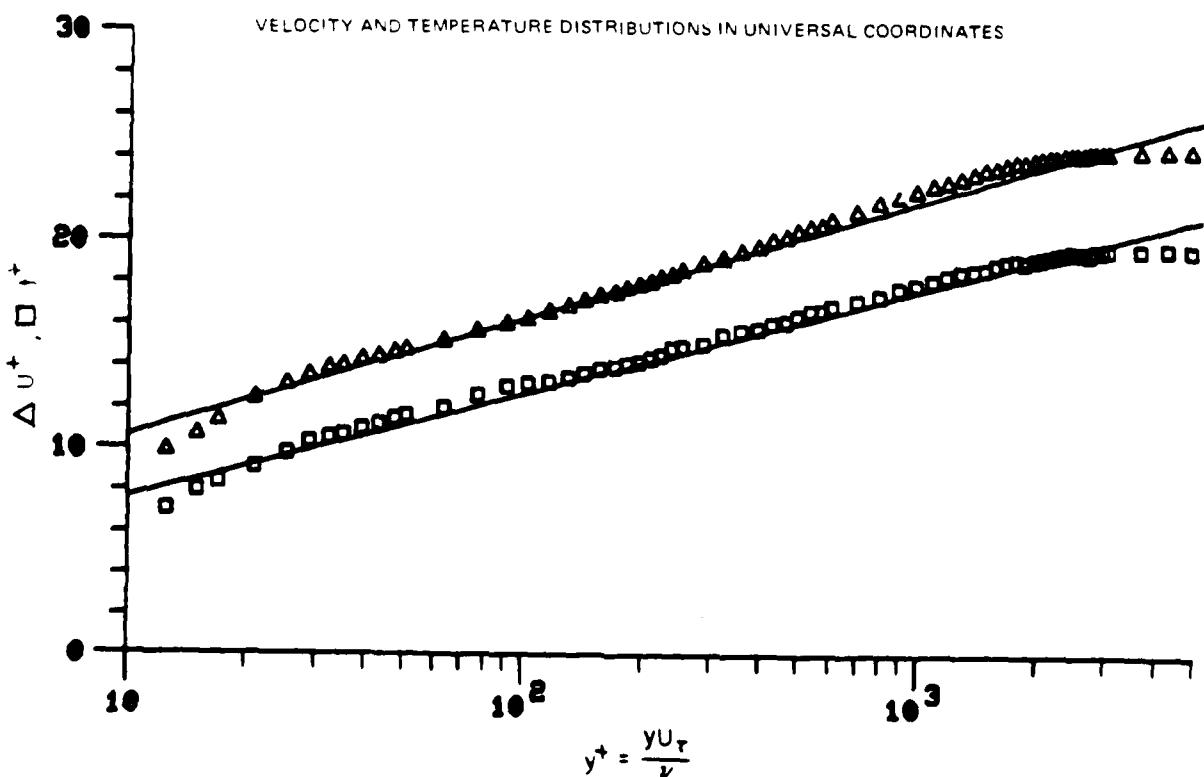
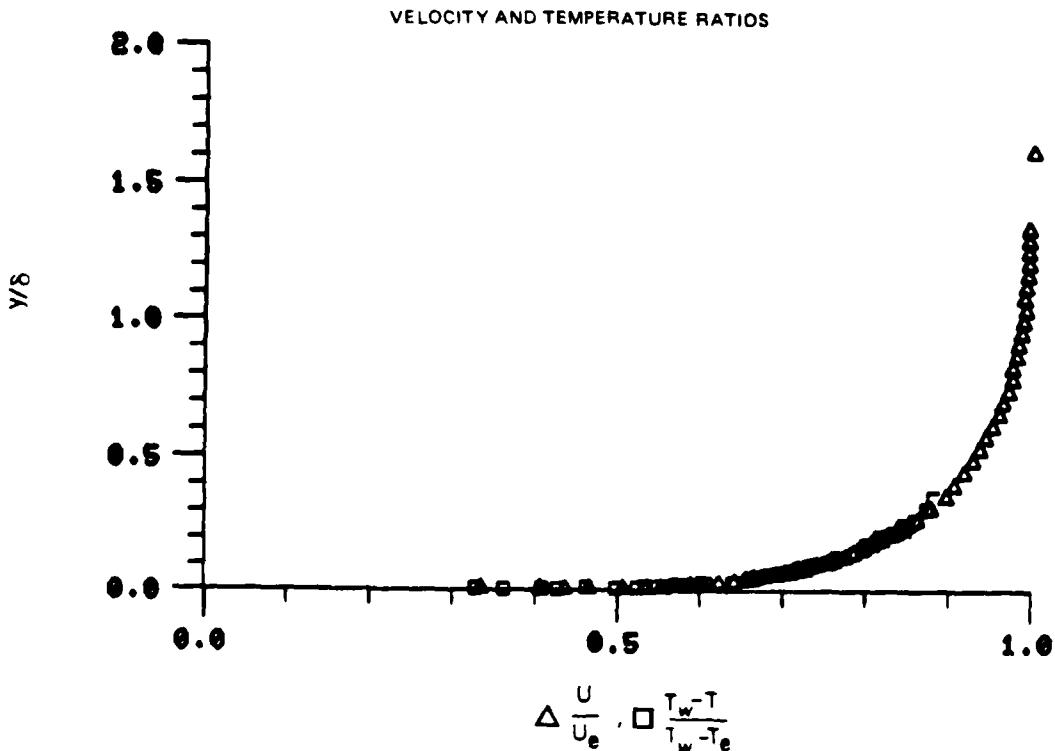


Figure 72. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 14

78-12-100-1

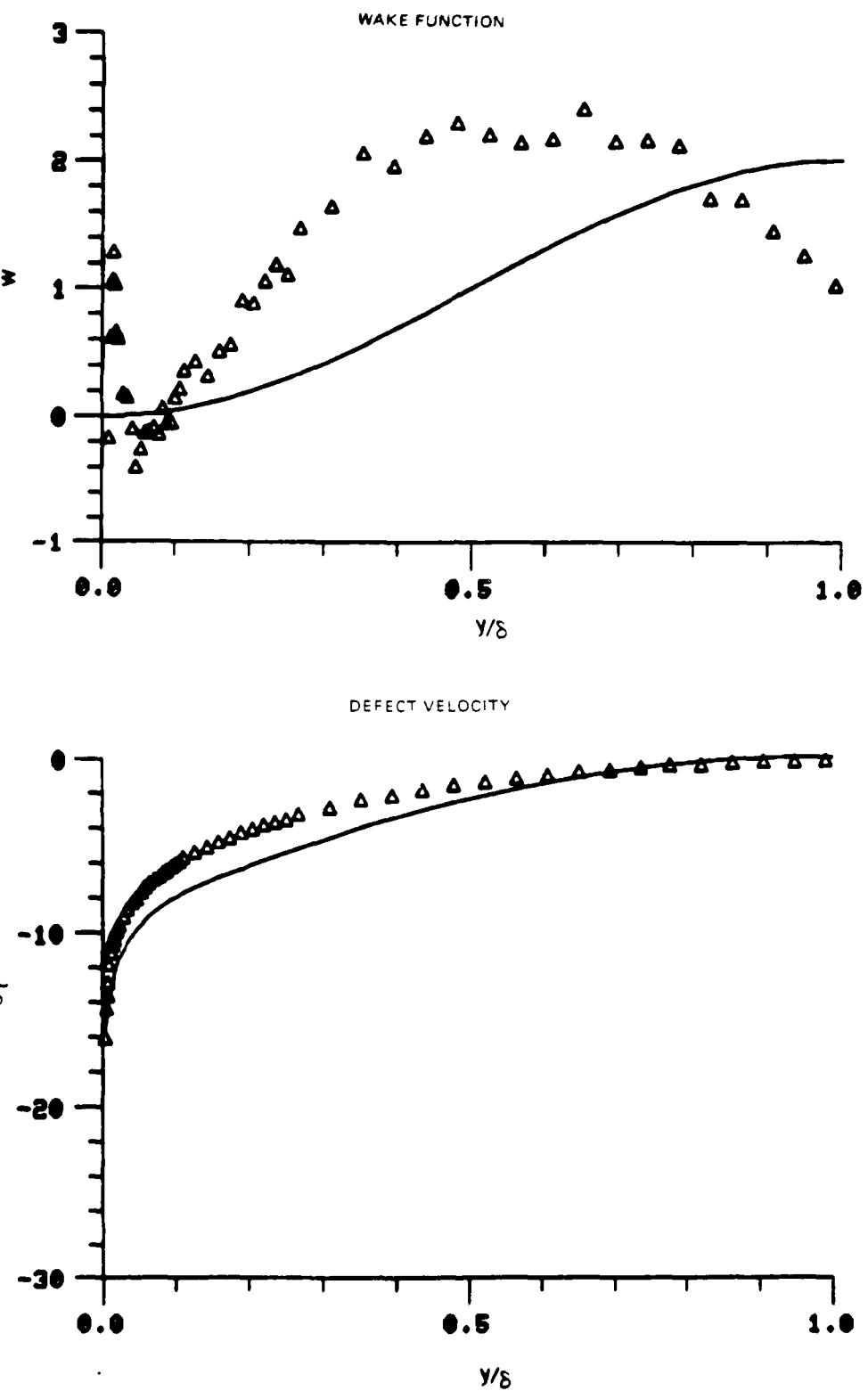


Figure 72. Boundary Layer Velocity Profiles
Run No. 9 Point No. 14

78-12-100-2

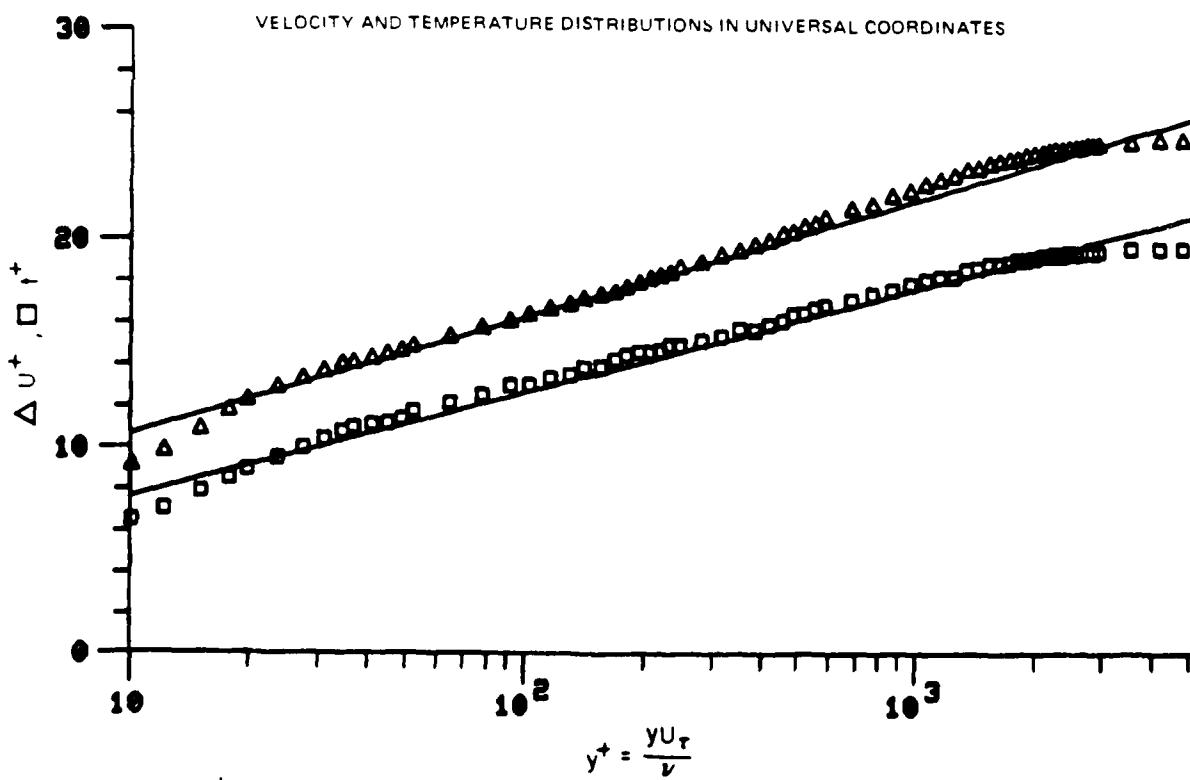
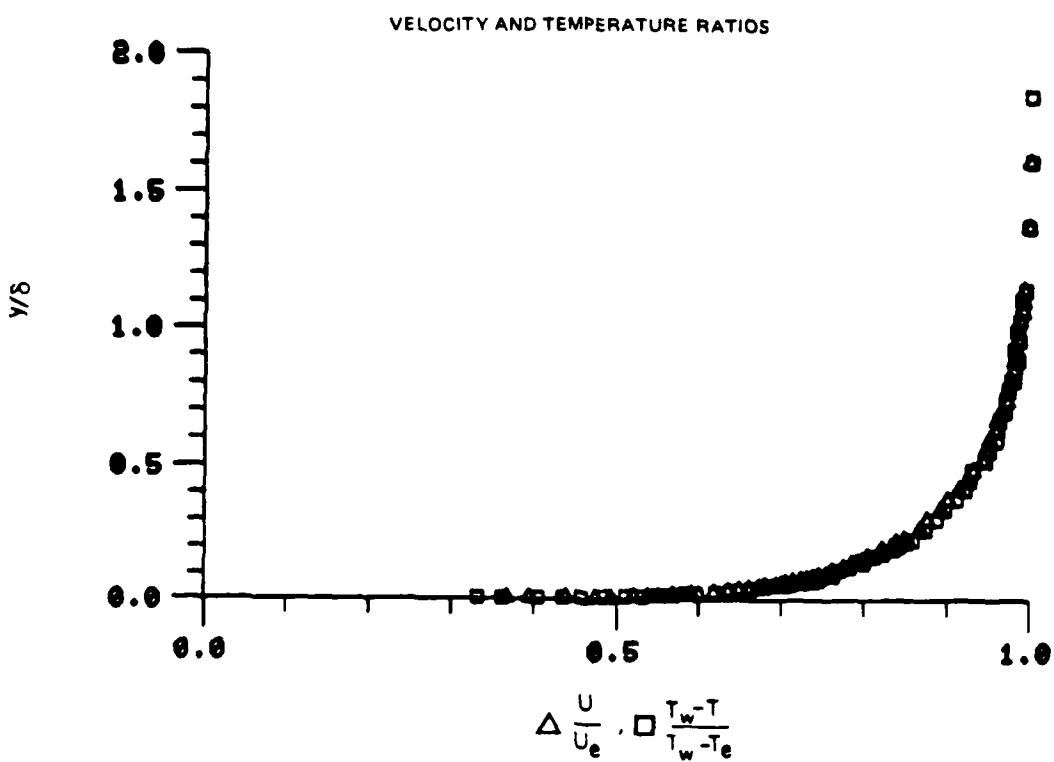


Figure 73. Boundary Layer Velocity and Temperature Profiles

Run No. 9 Point No. 16

78-12-100-1

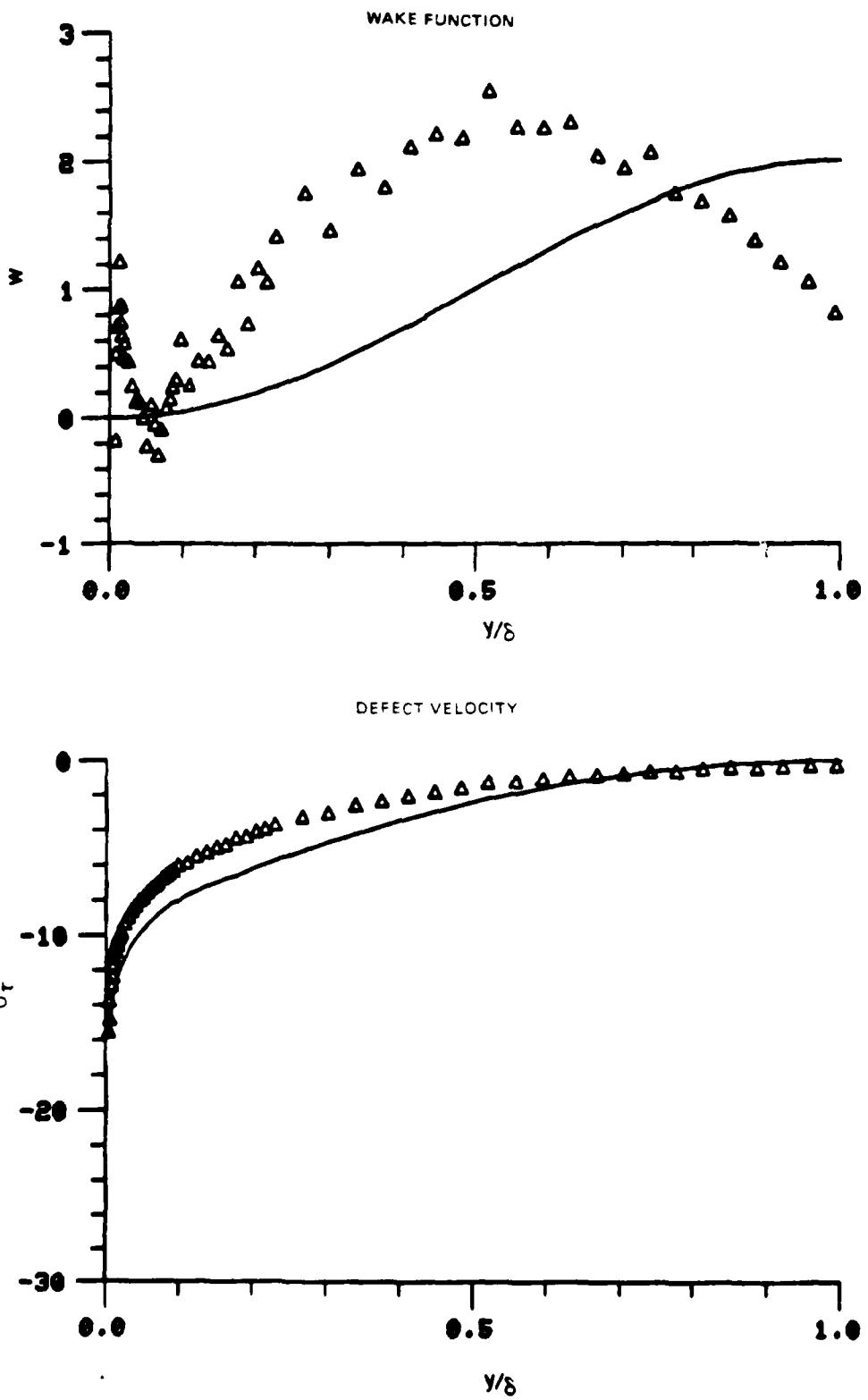


Figure 73. Boundary Layer Velocity Profiles
Run No. 9 Point No. 16

78-12-100-2

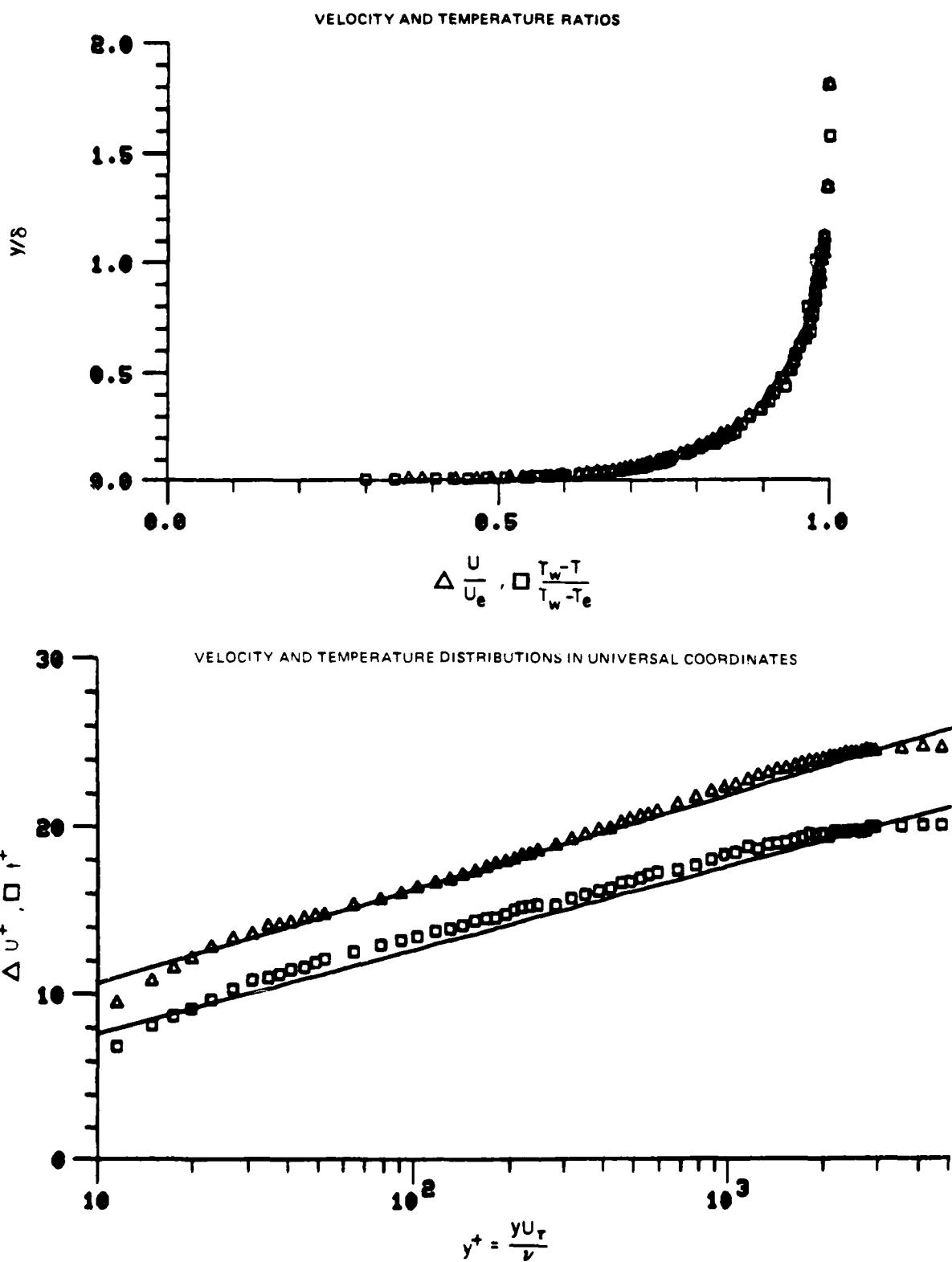


Figure 74. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 17

78-12-100-1

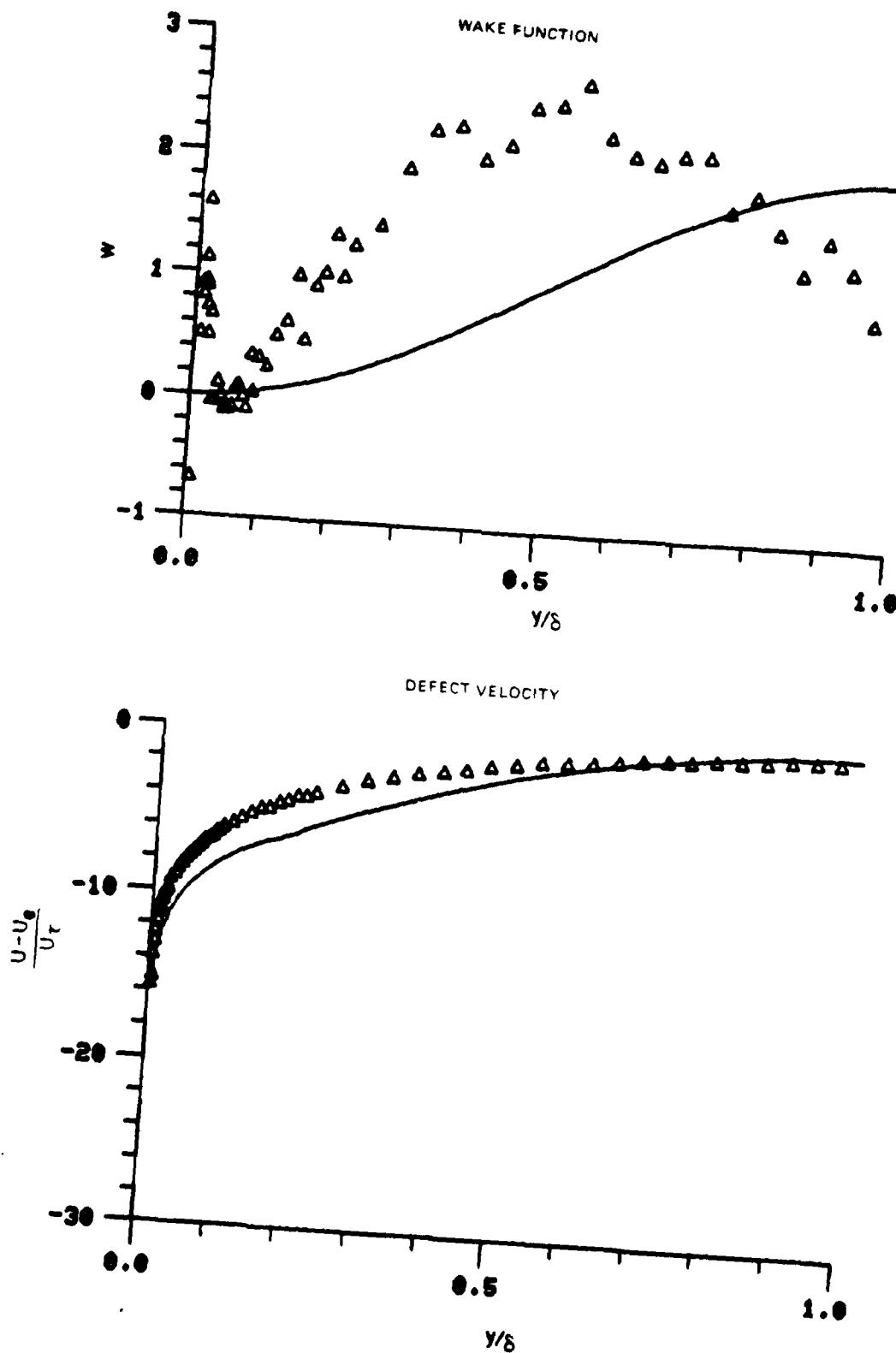


Figure 74. Boundary Layer Velocity Profiles
Run No. 9 Point No. 17

78-12-100-2

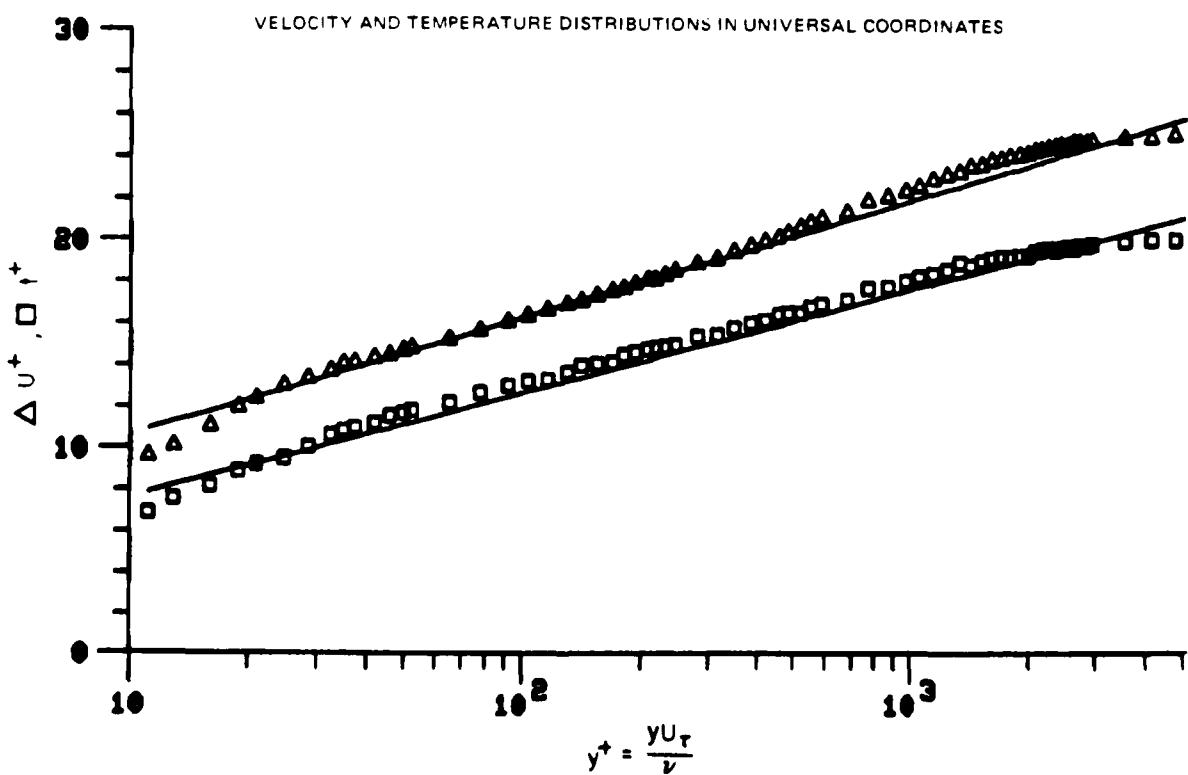
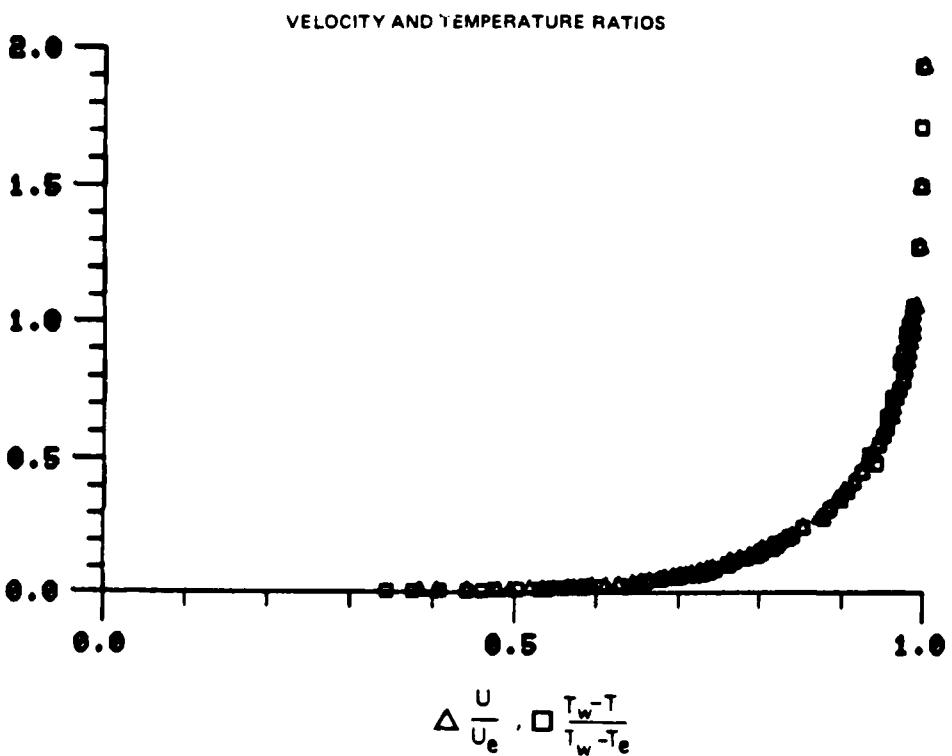


Figure 75. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 18

78-12-100-1

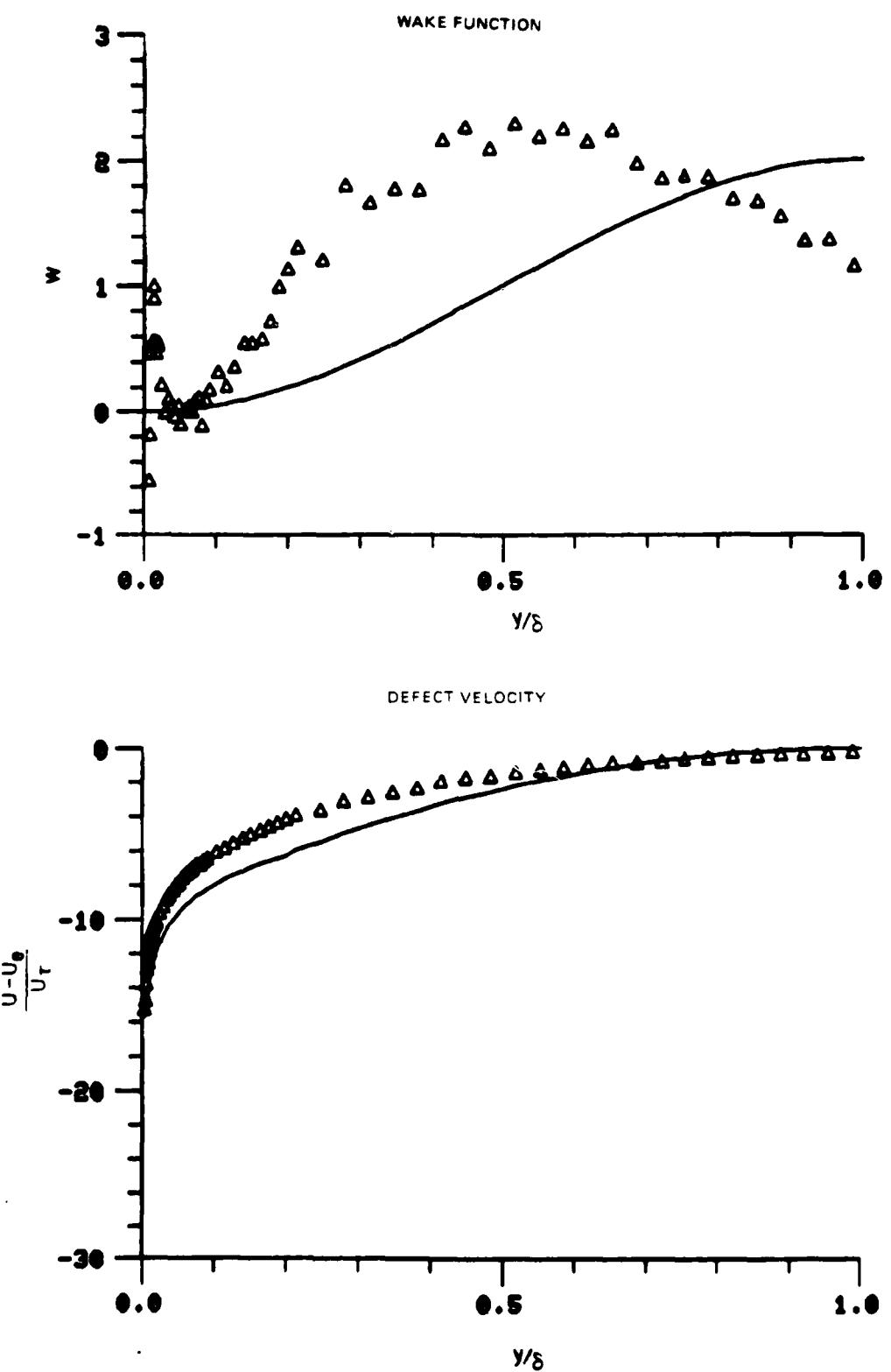


Figure 75. Boundary Layer Velocity Profiles
Run No. 9 Point No. 18

78-12-100-2

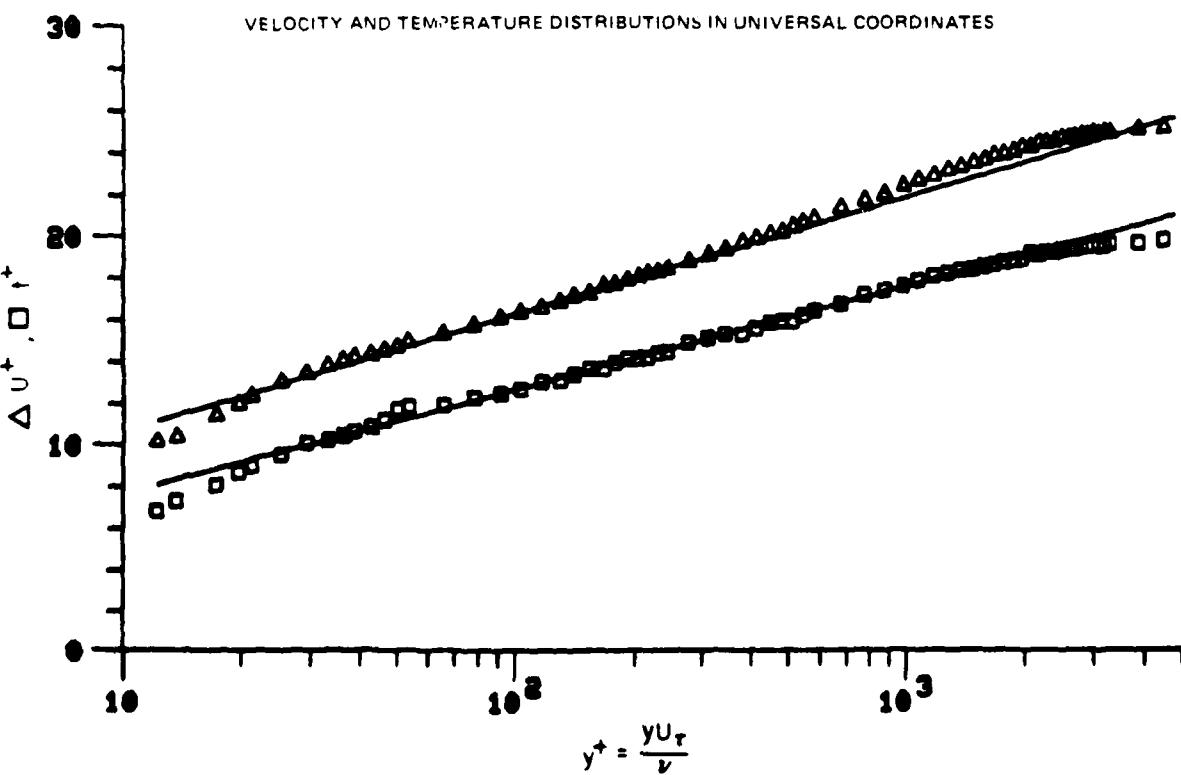
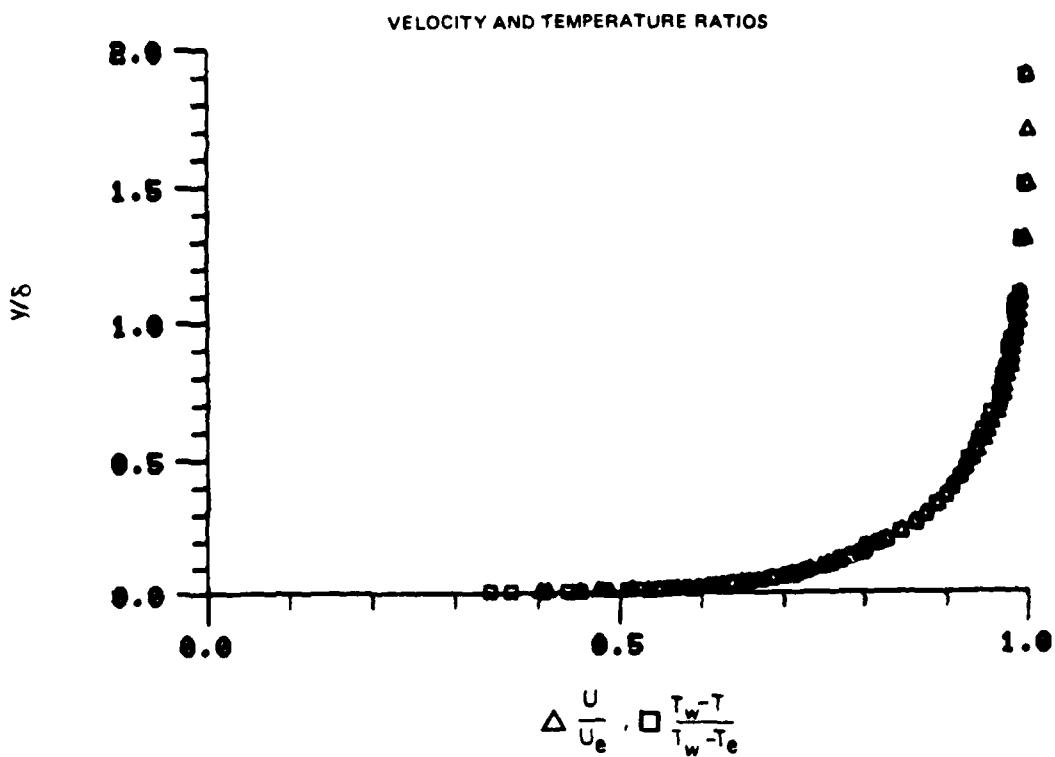


Figure 76. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 19

78-12-100-1

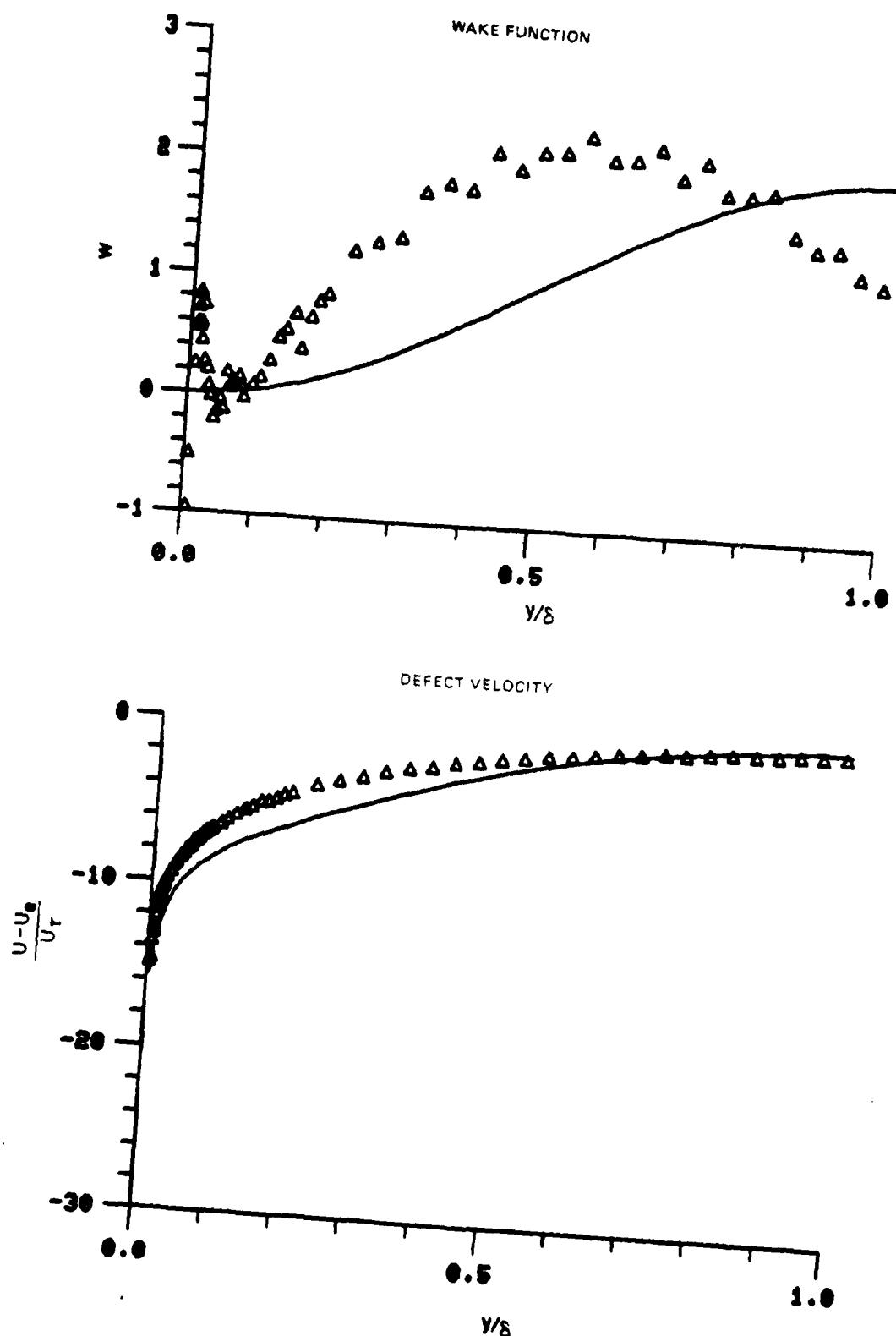


Figure 76. Boundary Layer Velocity Profiles
Run No. 9 Point No. 19

78-12-100-2

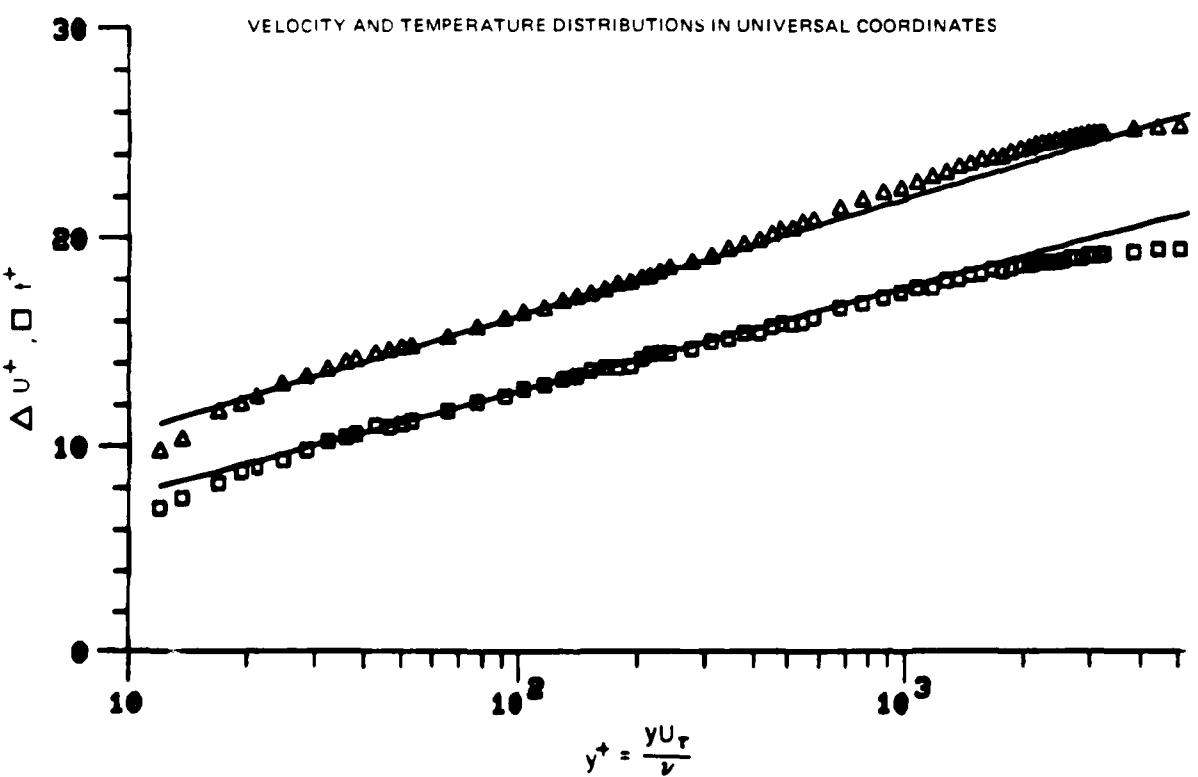
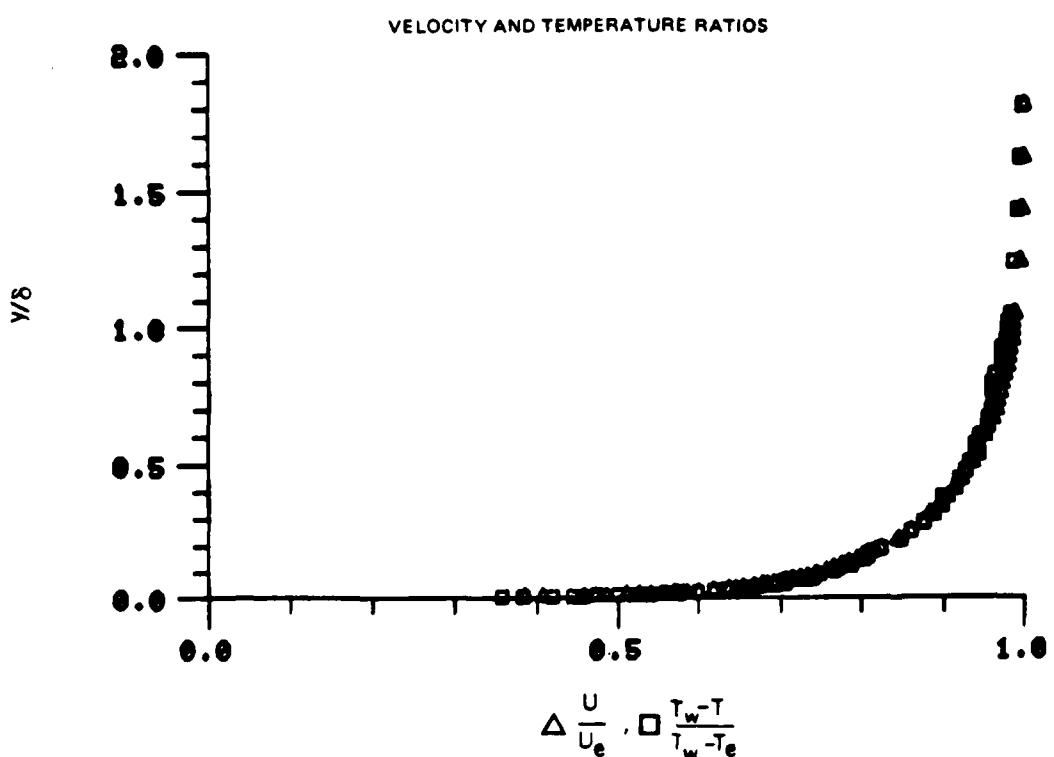


Figure 77. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 20 78-12-100-1

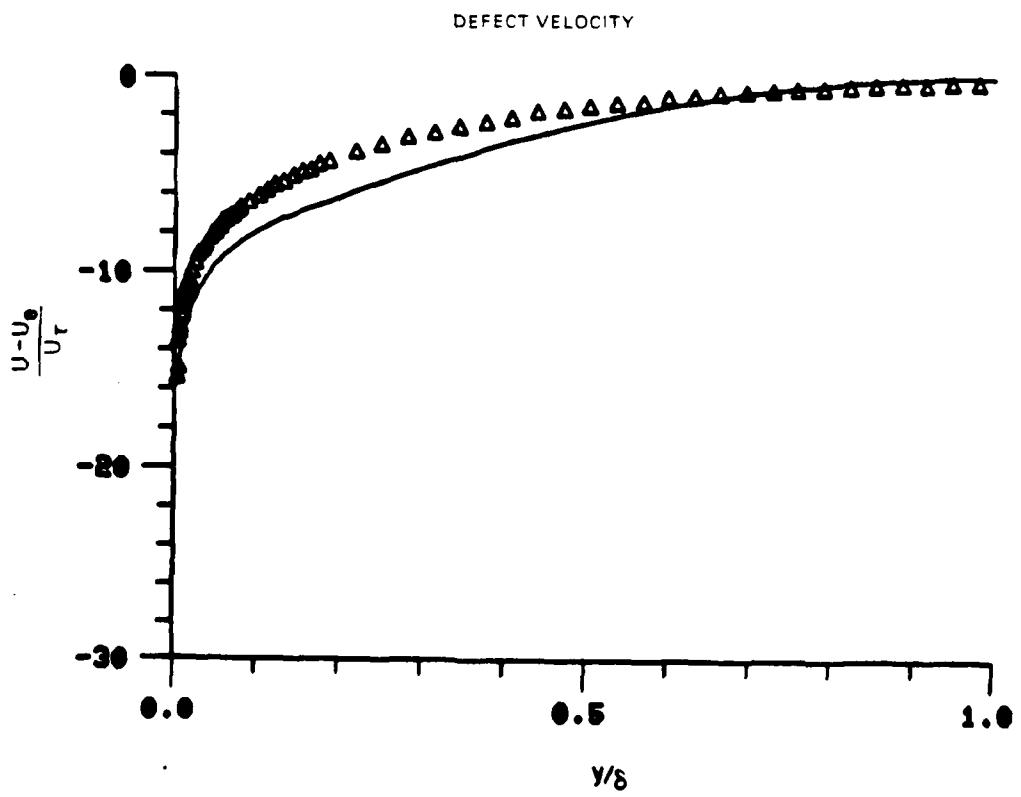
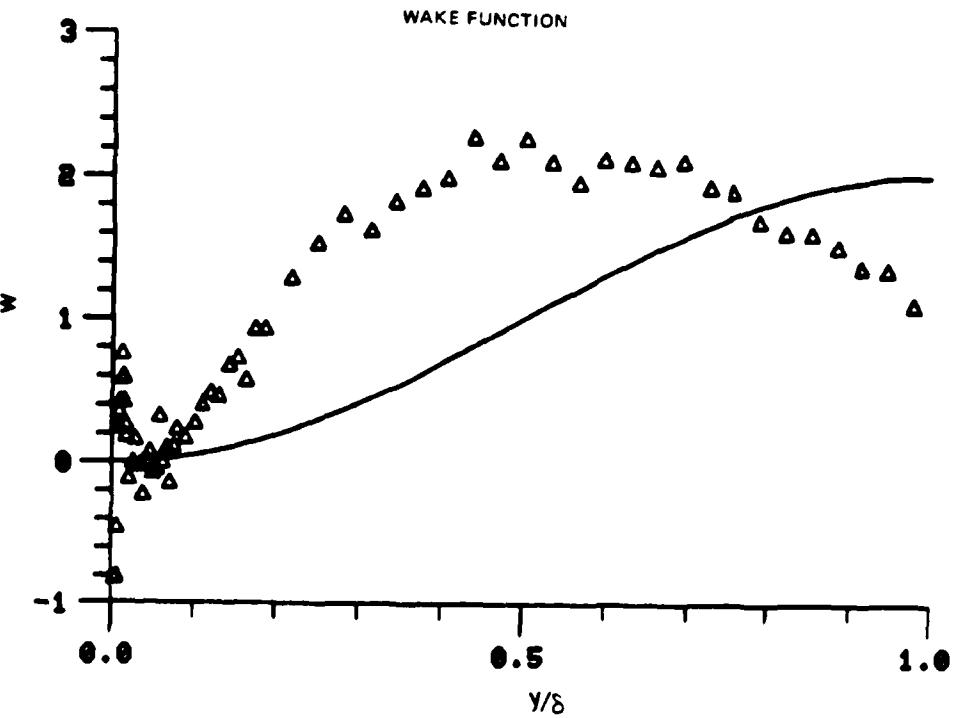


Figure 77. Boundary Layer Velocity Profiles
Run No. 9 Point No. 20

78-12-100-2

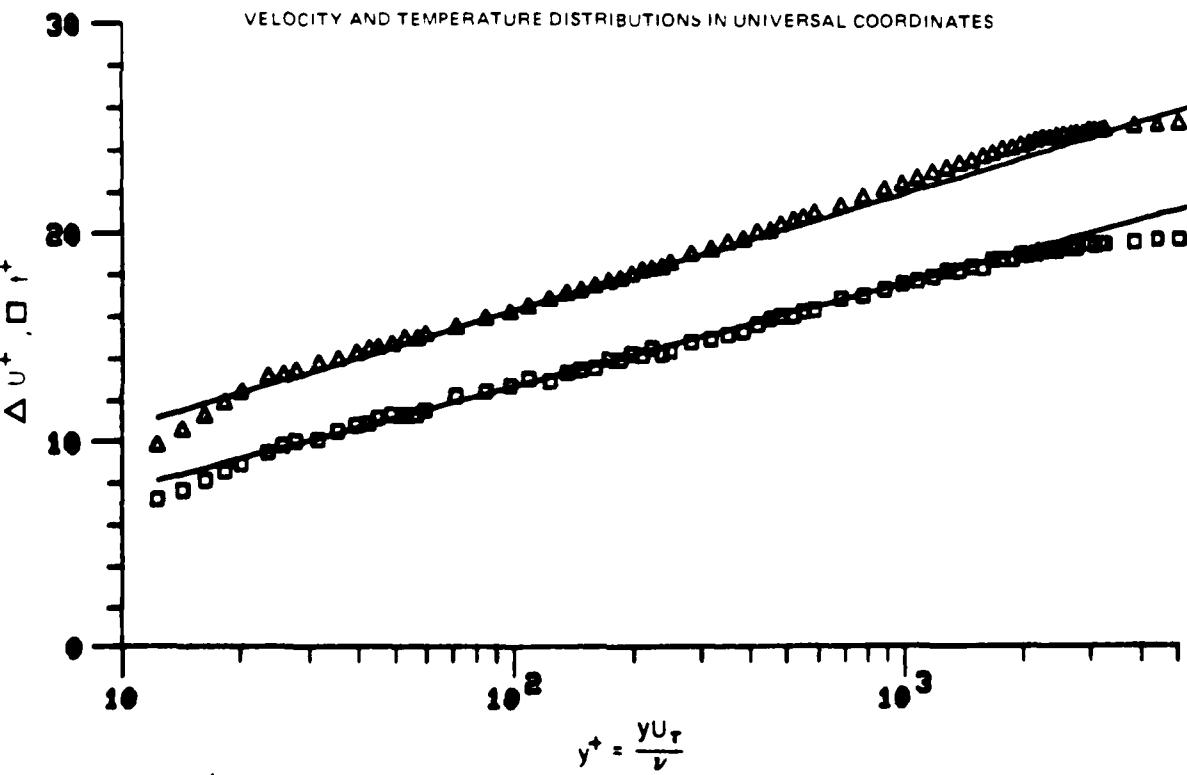
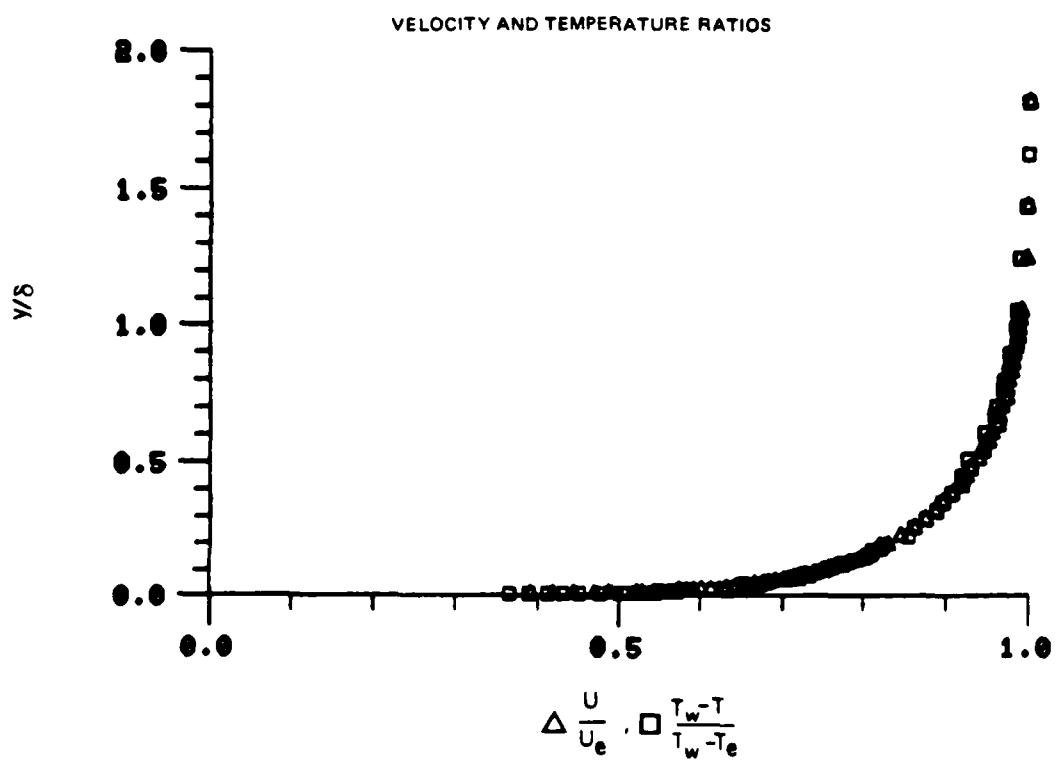


Figure 78. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 21

78-12-100-1

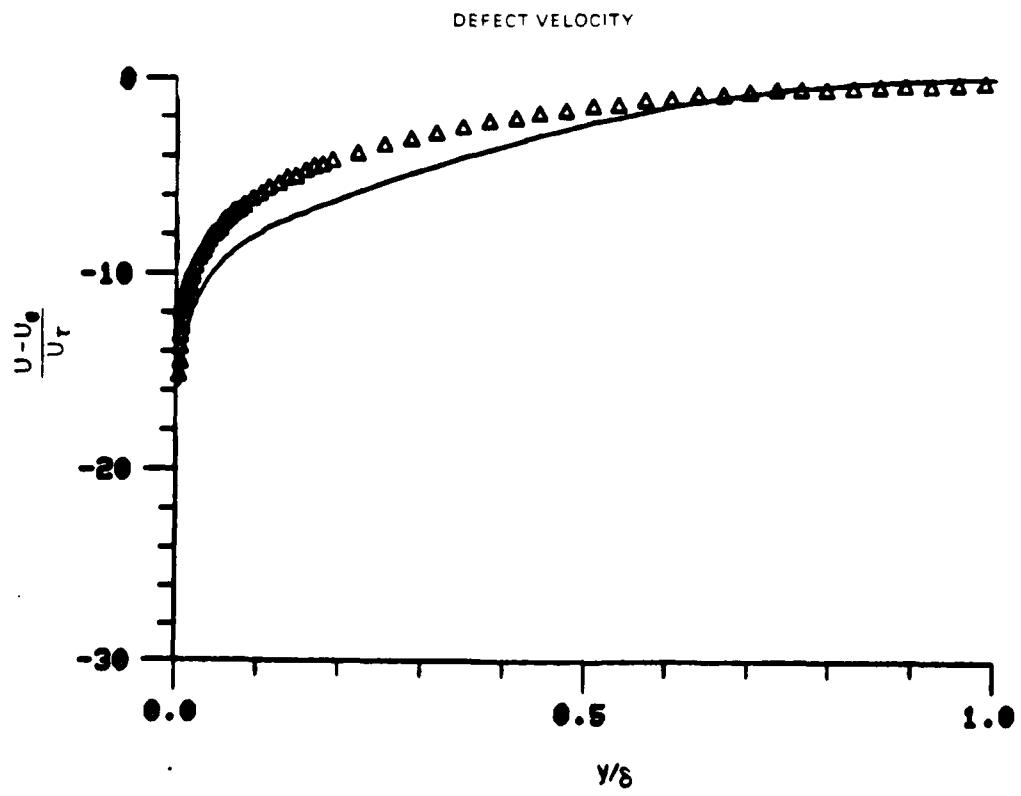
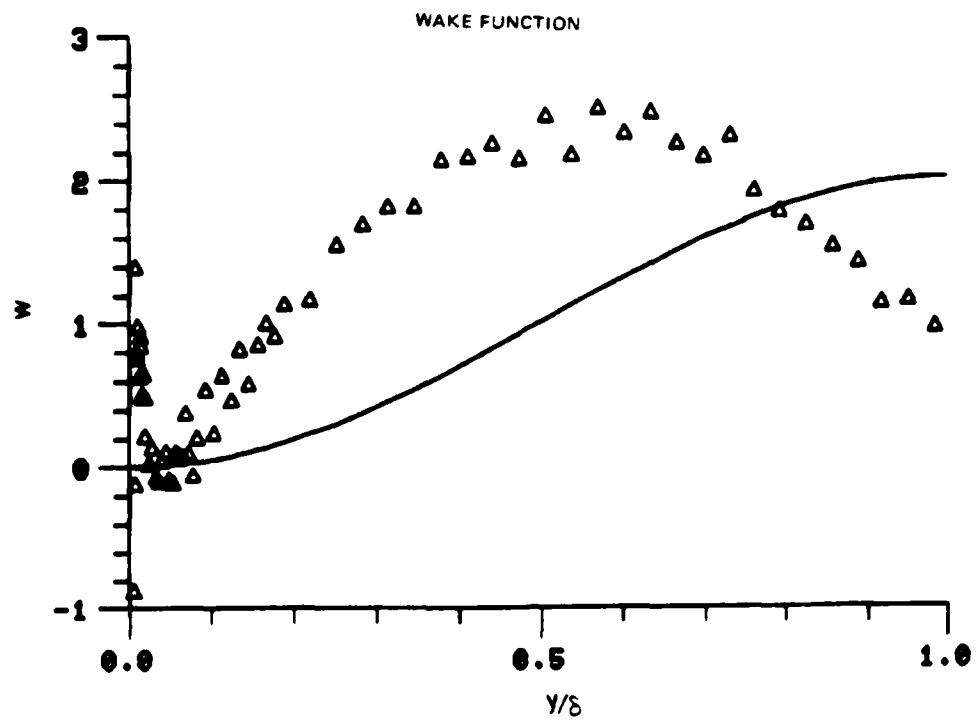


Figure 78. Boundary Layer Velocity Profiles
Run No. 9 Point No. 21

78-12-100-2

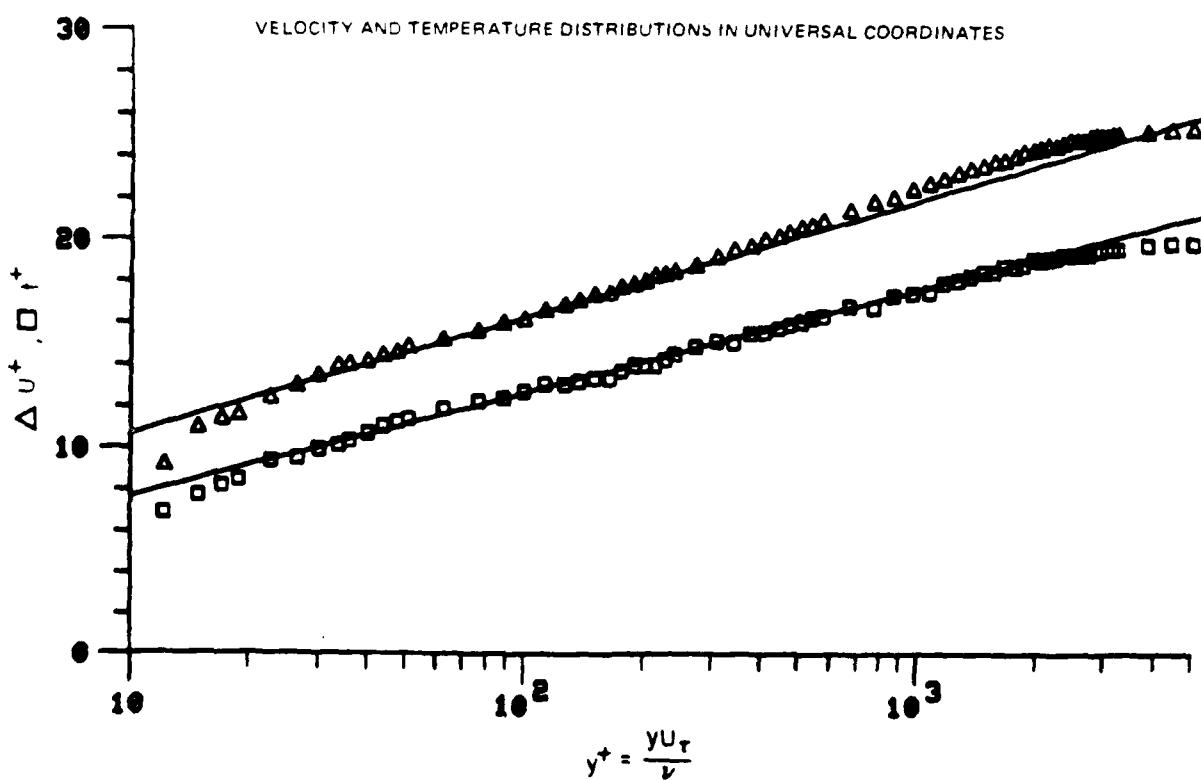
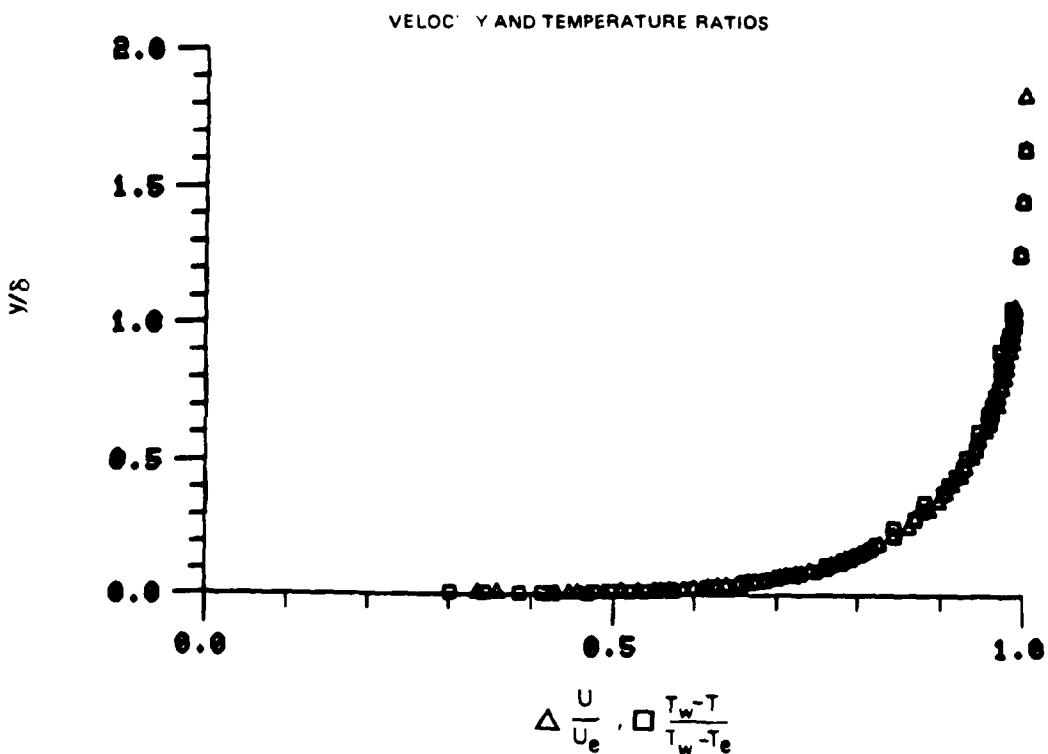


Figure 79. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 22

78-12-100-1

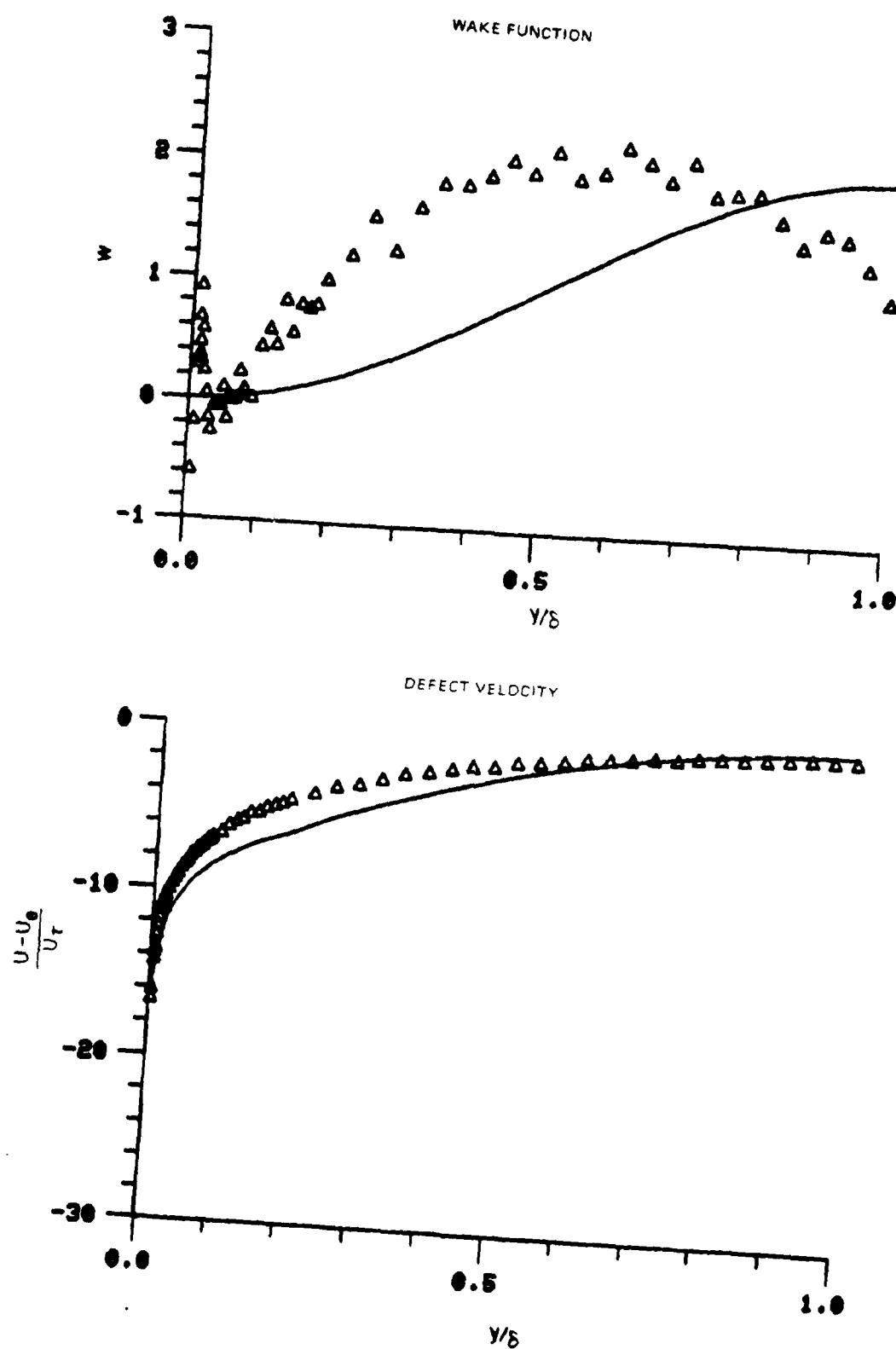


Figure 79. Boundary Layer Velocity Profiles
Run No. 9 Point No. 22

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